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# An Address

ON THE

# MECHANISM OF PANCREATIC SECRETION.

*Delivered at the Institute of Pathology and Medical Research, St. Mary's Hospital, London,*

BY JOHN MELLANBY, M.D. CAMB.,

PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF LONDON.

*(From the Sherrington School of Physiology, St. Thomas's Hospital, S.E.)*

A GENERAL survey of the activities of the body indicates that the functions of the liver and pancreas are intimately related to one another. In this lecture I propose to show how the external secretion of the liver (bile) determines the external secretion of the pancreas (pancreatic juice). I shall consider the subject from the following standpoints: (1) the presence of bile in the duodenum as the intestinal stimulus for pancreatic secretion; (2) secretin as the specific stimulus for the pancreas; (3) the relation of bile-salts to secretin—the isolation of secretin; (4) the path of absorption of secretin; (5) the influence of the vagus nerve on the composition of pancreatic juice; and (6) the mechanism for the discharge of bile into the duodenum.

## PRESENCE OF BILE IN THE DUODENUM AS THE INTESTINAL STIMULUS FOR PANCREATIC SECRETION.

From general considerations of structure it is evident that the rate of secretion of pancreatic juice should be comparable to that of saliva. In the early days of experimental physiology it was observed that a dog with a permanent pancreatic fistula gave a copious secretion of pancreatic juice after feeding. In acute experiments, however, under general anæsthesia, it was difficult to obtain more than a few drops of pancreatic juice even after such procedures as vagal stimulation, the intravenous injection of pilocarpine, the injection of alcohol into the alimentary canal, &c. The first important information in regard to pancreatic secretion arose from the observation that the introduction of hydrochloric acid into the stomach or duodenum led to a secretion of pancreatic juice. This fact was investigated by many observers, but in this lecture I propose to discuss two views only. In 1901 Popielski [1] stated that the introduction of hydrochloric acid into the duodenum caused the secretion of pancreatic juice by a local reflex nervous mechanism between the duodenum and pancreas. In 1902 Bayliss and Starling [2] showed that this conception was erroneous since the introduction of acid into the duodenum, isolated from the body except by its blood-vessels, still caused a secretion of pancreatic juice. This result led directly to the experiment in which Bayliss and Starling gave a striking demonstration of hormone action—namely, that an acid decoction of the duodenal mucosa injected into the blood stream produced a large secretion of pancreatic juice. These experiments formed the basis of the hypothesis which has been generally accepted for the past 20 years—that prosecretion exists in the mucous membrane of the duodenum, that hydrochloric acid from the stomach converts prosecretin into secretin, and that secretin after absorption into the blood is carried to the pancreas and excites it into activity.

It has long been recognised, however, that many facts militate against the acceptance of this hypothesis which makes pancreatic secretion dependent upon gastric secretion. Thus Czerny [3] observed that a dog which had undergone complete gastrectomy lived and showed no diminished power of digestion. This animal experiment has its homologue in the many successful cases of more or less complete gastrectomy which have been carried out on human beings. Further, achlorhydria is a relatively common occurrence in apparently normal individuals and is not associated with any digestive disturbances. Finally, Dodds and Bennett [4] carried out a series of experiments on themselves in which they introduced a neutral food into the duodenum. A fall in the percentage of $CO_2$ in the alveolar air indicated that normal pancreatic secretion followed this duodenal alimentation. A consideration of all these facts led me to reinvestigate the mechanism of pancreatic secretion. At the outset I assumed the accuracy of the prosecretin hypothesis and made secretin extracts by boiling the duodenal mucosa with 0·2 per cent. HCl, &c.

*Distribution of Prosecretin.*—Prosecretin varies widely in its distribution in animals. In the carnivorous animal (cat) it is practically limited to the duodenum; in the omnivorous animal (pig) it is found in considerable quantities at least 10 feet from the pyloric sphincter; in the herbivorous animal (goat) large quantities are found not only in the duodenum but also in the ileum. This distribution indicated that acids other than hydrochloric were capable of converting prosecretin into secretin. To test this hypothesis extracts were made of the duodenal mucous membrane with water containing amino-acids as glutamic acid, leucine, and tyrosine. All these extracts contained large quantities of secretin, although it may be observed that leucine and tyrosine are neutral to litmus (Mellanby and Huggett).[5]

*Preparation of Secretin.*—This result led me to explore systematically the conditions under which secretin solutions may be made. Extracts of the duodenal mucous membrane of a pig were made with a variety of solvents and the comparative secretin contents of these extracts were determined. The table of figures shows the number of drops of pancreatic juice secreted as the result of injecting 2 c.cm. of the following extracts into the femoral vein of a series of anæsthetised cats:—

| Extract. | Pancreatic juice (drops). | Extract. | Pancreatic juice. (drops). |
|---|---|---|---|
| 75 % alcohol .. | 28 | $H_2O$ .. .. .. | 16 |
| 75 % acetone .. | 24 | 0·05 % NaOH .. | 20 |
| 5 % NaCl .. .. | 24 | 0·1 % NaOH .. | 12 |
| 0·7 % NaCl .. .. | 20 | 0·2 % HCl .. .. | 20 |

From these experiments it was evident that hydrochloric acid possesses no specific capacity for making secretin from prosecretin. Latterly I [6] have shown that elevation of temperature is not essential. In fact, the best method for making secretin consists in grinding up the duodenal mucous membrane with four parts of absolute alcohol at room temperature. The filtrate contains a large quantity of secretin in a relatively stable condition since it shows no loss of activity even after considerable periods of time. These results prove conclusively that secretin exists in a preformed condition in the mucous membrane of the small intestine, the distribution of this secretin varying in different species of animals.

*Specific Stimulus for Pancreatic Secretion.*[7]—Bayliss and Starling assumed that the formation of secretin from prosecretin by the action of acid chyme led ipso facto to the absorption of this secretion into the blood, and hence to the secretion of pancreatic juice. But if secretin exists in a preformed condition in the duodenal mucous membrane the problem arose as to what particular intestinal event (assuming that secretin calls out the activity of the pancreas) causes the absorption of secretin into the blood and hence to the discharge of pancreatic juice. In the literature on the subject of pancreatic secretion a large number of substances have been described as producing a flow of pancreatic juice when injected into various parts of the alimentary canal. Among such substances may be mentioned hydrochloric acid, water, fats, soaps, alcohol, mustard, and croton oil. A large number of experiments were carried out to investigate these

statements. On one occasion only a definite secretion of pancreatic juice was obtained—namely, after the injection of 50 c.cm. of 0·1 per cent. HCl into the duodenum of a cat. In this case only 10 drops of juice were secreted in 30 minutes. It was evident, therefore, that the entrance of hydrochloric acid into the duodenum does not constitute the essential stimulus for pancreatic secretion. The clue to the solution of the problem was obtained from an experiment in which extracts of various portions of the alimentary canal, alone or in conjunction with one another, were injected into the duodenum of a cat. It was found that the injection of a mixture of bile and an acid extract of the pyloric mucous membrane was followed by a copious secretion of pancreatic juice. After a latent period of ten minutes pancreatic juice was secreted at the rate of two drops a minute, and the secretion continued for two hours. At the end of that time 6 c.cm. of pancreatic juice had been collected.

*Dilute Bile into the Duodenum.*—An analysis of this result showed that the effect was due to the introduction of dilute bile into the duodenum, the addition of the acid extract of the pyloric mucous membrane having conferred on the bile the adequate reaction for calling out its activity. The following experimental results illustrate the essential facts.

10 c.cm. of dilute acidified bile (2 c.cm. bile, 8 c.cm. 0·9 per cent. NaCl, 0·05 c.cm. HCl N) was injected into the duodenum of a fed cat. After a short latent period (five minutes) pancreatic juice was rapidly secreted, thus :—

| Minutes. | Pancreatic juice (drops). | Minutes. | Pancreatic juice (drops). |
|---|---|---|---|
| 5 | 1 | 24 | 40 |
| 7 | 5 | 36 | 60 |
| 9 | 10 | 65 | 80 |
| 13 | 20 | 95 | 100 |

An analysis of this result showed that the essential factor was the cholic acid contained in the bile-salts, since the injection of pure sodium cholate of an adequate reaction into the duodenum led to a large secretion of pancreatic juice.

*Function of Mucin in Bile.*—The injection of bile-salts or bile-acids into the gut often led to hæmolysis and hæmoglobinuria. This fact suggested a possible function for mucin. Therefore the comparative activities of bile (A) and mucin-free bile (B) as pancreatic excitants were determined.

| Pancreatic juice (drops). | A. Hrs. | A. Mins. | B. Hrs. | B. Mins. |
|---|---|---|---|---|
| 1 | 0 | 54 | 0 | 22 |
| 5 | 0 | 58 | 0 | 29 |
| 10 | 1 | 16 | 0 | 34 |
| 20 | 1 | 21 | 0 | 47 |
| 40 | 1 | 32 | 0 | 57 |
| 90 | 2 | 20 | 1 | 5 |
| 120 | 2 | 53 | — | — |

The result indicates that mucin delays the absorption of bile-salts and thereby prevents hæmolysis of the red cells of blood whilst prolonging the action on the pancreas.

*The Adequate Reaction of Bile.*—I have stated that bile injected into the duodenum should possess an adequate reaction in order to cause a secretion of pancreatic juice. During this investigation it was observed that the injection of bile, which had been rendered slightly acid, into the duodenum in the majority of cases caused a copious secretion of pancreatic juice. In a few cases, however, practically no juice was secreted. A detailed investigation into this fact showed that the state of alimentary activity of the animal exercised a great influence on the capacity of any given bile to evoke a secretion of pancreatic juice. Briefly stated, a recently fed cat (within four hours of feeding) gave a large secretion of pancreatic juice after the injection of slightly acidified bile (pH 6·5) into the duodenum ; if, however, the cat had not been fed for 24 hours the effective pancreatic stimulant was the injection of a slightly alkaline bile (pH 8·0) into the duodenum. This fact illustrates the influence of reaction on the activities of the alimentary canal.

## SECRETIN AS THE CAUSE OF PANCREATIC ACTIVITY.

I have shown that bile injected into the duodenum calls out a secretion of pancreatic juice, and that the active substance in the bile is cholic acid. I now propose to consider the question whether the immediate agent stimulating the pancreas to activity is cholic acid, or secretin, or some hitherto undescribed substance. The direct injection of cholic acid into the blood causes no secretion of pancreatic juice. Therefore cholic acid is not the immediate stimulant to the pancreas. On the other hand, the injection of cholic acid into the duodenum calls out a secretion of pancreatic juice, whereas a similar injection into the ileum evokes no pancreatic response. In both cases the solution of cholic acid appears to be absorbed. The essential difference between the duodenum and ileum in the cat is that the former contains preformed secretin in the mucosa whilst the latter contains no secretin. It appears, therefore, that the absorption of cholic acid from the duodenum carries the secretin contained in the cells of the mucous membrane into the blood and thence to the pancreas, and that the immediate pancreatic stimulus is secretin carried to the pancreas by cholic acid. This assumption receives substantial support from experiments in which the vagus and sympathetic nerves were paralysed by atropine and ergotamine respectively.

*Paralysis of Vagus by Atropine.*—It is a well-known fact that paralysis of the vagus by atropine does not diminish, but slightly increases, the quantity of pancreatic juice secreted after the intravenous injection of secretin into an animal. The following experiment shows that vagal paralysis gives similar results on pancreatic secretion after the injection of dilute bile into the duodenum.

| Pancreatic juice (drops). | A. Mins. | A. Secs. | B. Mins. | B. Secs. |
|---|---|---|---|---|
| 1 | 9 | 40 | 6 | 20 |
| 10 | 9 | 30 | 6 | 35 |
| 20 | 13 | 35 | 11 | 54 |
| 40 | 24 | 22 | 20 | 0 |
| 60 | 36 | 40 | 28 | 12 |

Secretion A was obtained after the injection of 10 c.cm. dilute bile (pH 6·5) into the duodenum. After the cessation of this secretion 10 mg. of atropine were injected into the cat. Complete paralysis of the vagus ensued. Table B shows the rate of pancreatic secretion subsequently produced by the injection of bile similar to that used in experiment A. The figures show an augmentation of secretion similar to that observed after the direct injection of secretin into the blood.

*Paralysis of the Motor Side of the Sympathetic by Ergotamine.*—Paralysis of the sympathetic by the intravenous injection of ergotamine (1 mg.) does not diminish the pancreatic activity of secretin injected directly into the blood. Similarly, ergotamine does not diminish the capacity of bile injected into the duodenum to cause a secretion of pancreatic juice. The inability of vagal and sympathetic paralysis to influence the efficacy of an injection of bile into the duodenum to stimulate the pancreas affords strong evidence in favour of the assumption that the immediate stimulus to pancreatic activity is the presence of secretin in the blood.

## RELATION OF SECRETIN TO BILE-SALTS—THE ISOLATION OF SECRETIN.[6]

It is evident from the foregoing statements that the presence of bile of an adequate reaction in the small intestine causes secretin to pass from the cells of the mucosa into the blood and hence leads to a secretion of pancreatic juice. The probable mechanism of this secretion is indicated by the method I have described for the isolation of secretin. This method

is based on three observations: (*a*) secretin exists in a preformed condition in the duodenal mucosa; (*b*) secretin may be extracted from the mucous membrane by absolute alcohol; and (*c*) secretin is adsorbed from solution by precipitated bile-acids. A preliminary account of this method has been published. In this lecture I wish to emphasise the fact that the addition of bile-salts to the extract of 0·2 per cent. to an acid solution of secretin results in the precipitation of bile-acids to which the whole of the secretin is adsorbed. This observation probably indicates the essential mechanism whereby the introduction of bile-salts into the duodenum causes a secretion of pancreatic juice—viz., the bile-salts in their passage through the intestinal mucosa adsorb the secretin contained in the cells, and thereby carry it into the blood, and so to the pancreas. Secretin isolated by bile-salt precipitation possesses a remarkable degree of activity, since 0·03 mg. evokes the secretion of 3 c.cm. of pancreatic juice in a cat. It is freely soluble in water and a strong solution gives a faint biuret reaction and a definite Pauly reaction. Since Millon's test is negative the positive Pauly reaction probably indicates that secretin contains histidine or some derivative of it in its molecule. It is very rapidly destroyed by pepsin and trypsin. Heating to 100° C. with NaOH (0·1 M) for five minutes destroys it; similar heating with HCl (0·1 M) destroys 50 per cent. of it. These properties indicate that secretin is a polypeptide. Purified secretin exercises no depressant action on the blood pressure. Incidentally it may be observed that although secretin possesses properties very similar to those of insulin, yet a subcutaneous injection of secretin has no effect on the blood-sugar of a rabbit, although such an injection causes a slow flow of pancreatic juice. Therefore its action is limited to the external secretion of the pancreas, and it has no effect on carbohydrate metabolism either directly or indirectly through an action on the islets of Langerhans.

### THE PATH OF ABSORPTION OF SECRETIN.[8]

In 1917 Djenab[9] stated that secretin injected into the portal circulation is a much less effective stimulant of pancreatic secretion than when injected into the jugular vein. This observation has been confirmed by many observers (Halliburton and de Souza,[10] Cowgill and Deuel [11]). Since the obvious path of absorption of secretin is via the portal blood these results indicated that secretin is not necessary for the production of pancreatic juice in the normal animal. The experimental results described by Djenab are invariably obtained when crude secretin solutions are injected in turn into the femoral and mesenteric veins. The diminished secretion in the latter case is very striking. Thus in one experiment the injection of 2 c.cm. of secretin into the femoral vein of a cat resulted in the production of 25 drops of pancreatic juice, whilst a similar injection into the mesenteric vein caused the secretion of only 10 drops of juice. It is evident that this apparently anomalous action of secretin may be due to one of two causes: (*a*) the initial action of secretin on the liver, or (*b*) the absorption of secretin from the intestinal mucosa into the lacteals and its indirect passage into the blood.

Bayliss and Starling,[2] in their original paper, stated that secretin in addition to stimulating the pancreas to activity doubles the rate of flow of bile. It appeared, therefore, that an injection of secretin into the portal circulation would result in the secretin acting as a cholagogue rather than as a stimulant of pancreatic secretion. This hypothesis was tested by determining the relative capacities of secretin to act as a cholagogue when injected into the femoral vein and into the portal vein. It was found that the hypothesis was incorrect since secretin was a less effective stimulant to the liver when injected into the portal vein than when injected into the femoral vein. As an alternative hypothesis it was assumed that secretin was absorbed into the lacteals from the intestinal mucosa and passed indirectly into the blood through the left thoracic duct. This hypothesis appeared to be supported by the well-known observation that a meal of fat promotes the secretion of a large quantity of pancreatic juice in a dog with a pancreatic fistula. This hypothesis also was tried by direct experiment. In this case the efficacy of bile injected into the duodenum to cause a secretion of pancreatic juice before and after tying the left thoracic duct was determined. It was found that the ligature of the thoracic duct neither increased nor diminished the secretion of pancreatic juice produced after the injection of dilute bile into the duodenum. No evidence was therefore obtained that secretion or any other alimentary stimulant to pancreatic secretion was absorbed into the lymphatic system of the intestine. The correct explanation of Djenab's striking results was obtained from the comparative effects on pancreatic secretion produced by the injection of pure secretin into the portal and the femoral vein respectively. This experiment showed that there is practically no difference in the amount of pancreatic juice secreted after the injection of pure secretin into the portal or the femoral blood. Thus 0·05 mg. of secretin contained in 1 c.cm. of 0·9 per cent. NaCl was injected in turn into the femoral vein and a small branch of the mesenteric vein of a cat. In the former case the total secretion amounted to 60 drops, in the latter case to 50 drops of pancreatic juice. Probably the anomalous results obtained when crude secretin extracts are injected into the two circulations are due to the association of the secretin in such extracts with other substances which are removed from the portal blood when passing through the liver. The results may illustrate the importance of the liver in protecting the body against the absorption of poisons from the alimentary canal—a liver function which has been emphasised by Willcox [12] and designated by the word toxiphylactic.

### INFLUENCE OF THE VAGUS NERVE ON THE COMPOSITION OF PANCREATIC JUICE.[13]

I have previously confined myself to the consideration of the humoral control of pancreatic secretion. In this section I propose to consider the part played by the nervous system in the mechanism.

Previous to the discovery of secretin the nervous mechanism was supposed to play the dominant rôle in pancreatic secretion. But whereas in acute experiments on dogs under general anæsthesia injections of secretin may produce 150 c.cm. of pancreatic juice in the course of a few hours stimulation of the vagus nerves either by electrical methods or by the intravenous injection of small doses of pilocarpine rarely produces 10 c.cm. of pancreatic juice in a similar time. Further, it was shown that the quantity of pancreatic juice secreted as the result of the intravenous injection of secretin was independent of the paralysis of the vagus by atropine. On the basis of these results it was assumed generally that secretin played the dominant rôle in pancreatic secretion and that the vagus took only a minor part in the mechanism, and possibly only came into action as the immediate result of taking food. Two facts, however, militated against this hypothesis: (*a*) the extraordinary concentration of enzymes contained in vagal pancreatic juice, and (*b*) clinical observations on cases of dyspepsia. A detailed examination of the quantity and quality of pancreatic juice under a variety of conditions established the important function of the vagus nerve in pancreatic secretin.

The composition of seven successive quantities of pancreatic juice secreted by a cat under the influence of secretin was determined. The following figures show the quantities of sodium bicarbonate, trypsinogen, and amylase in these fractions:—

| Per cent. of $NaHCO_3$ (N)— | | | | | | |
|---|---|---|---|---|---|---|
| 0·128 | 0·124 | 0·134 | 0·128 | 0·132 | 0·128 | 0·124 |
| Units of trypsinogen— | | | | | | |
| 665 | 640 | 360 | 400 | 230 | 280 | 150 |
| Units of amylase— | | | | | | |
| 340 | 290 | 160 | 160 | 70 | 70 | 60 |

Two facts are evident from these figures: (*a*) throughout the experiment the quantity of

$NaHCO_3$ contained in the successive portions of juice remained approximately constant about a mean value of 0·128 N per cent.; and (*b*) the quantities of trypsinogen and amylase continually decreased during secretion, the final fraction containing less than one-quarter of trypsinogen and one-sixth of amylase of the quantities in the first fraction.

This result might have been due to the exhaustion of the fluid under the secretin stimulus. This hypothesis, however, does not accord with the histological appearance of the gland at the end of a long period of activity produced by secretin. Moreover, it is directly negatived by the effect of vagal stimulation (by the intravenous injection of pilocarpine) after the apparent exhaustion of the gland by the action of secretin.

The following figures show this effect of vagal stimulation:—

| | Secretin only. | | | | Secretin containing 2 mg. pilocarpine. |
|---|---|---|---|---|---|
| Per cent. of $NaHCO_3$ (N)— | | | | | |
| 0·150 | 0·158 | 0·156 | 0·148 | 0·146 | .... 0·146 |
| Units of trypsinogen— | | | | | |
| 1350 | 1300 | 1150 | 800 | 600 | .... 1300 |
| Units of amylase— | | | | | |
| 270 | 210 | 160 | 160 | 60 | .... 200 |

The figures show the constancy of the bicarbonate and the steady diminution in trypsinogen and amylase in successive fractions of the pancreatic juice secreted under the stimulus of secretin only; but after the injection of pilocarpine—i.e., after the stimulation of the vagal endings in the gland—the quantity of alkali remained the same, but the trypsin and amylase contents of the juice were raised to approximately their initial concentration. These and a series of similar experiments illustrate the relative functions of secretin and the vagus nerves in the mechanism of pancreatic secretion. Briefly stated, it seems that the metabolism of the enzymes of the pancreas is under the control of the vagus nerves, whilst the quantity of fluid and the bicarbonate content of this fluid is determined by secretin.

Secretin, therefore, determines the presence in the intestine of the pancreatic enzymes in a large volume of sodium bicarbonate solution. This solution possesses an optimum reaction for the activity of lipase, amylase, and trypsin, and is able to preserve the neutrality of the intestinal contents during digestion. This dual hypothesis coördinates the views of Pavlov and his fellow workers on the function of the vagus in pancreatic digestion with the work of Bayliss and Starling on the humoral control of pancreatic secretion.

## DISCHARGE OF BILE INTO THE DUODENUM.

I propose to deal in a brief way only with this subject. The majority of animals possess a gall-gladder which acts as a reservoir for the storage of bile during the quiescent periods of digestion. A few animals, such as the horse and rat, possess no gall-bladder, but in these animals the biliary passages are dilated so as to form a comparatively large reservoir for bile. It is evident, therefore, that the discharge of bile into the duodenum must be considered from two points of view: (*a*) the relaxation of the common bile-duct leading into the duodenum, (*b*) the contraction of the gall-bladder.

(*a*) The mechanism of this reaction has been variously stated to be under the control of the vagus and sympathetic system of nerves, and also to be due to a local reflex from the intestine to the gall-bladder. It appears, however, that the mechanism is more simple. There is no doubt but that the passage of a peristaltic wave of contraction from the pylorus greatly diminishes for a few seconds the pressure required to force fluid from the common bile-duct through the ampulla of Vater into the duodenum. This effect is doubtless due to the obliquity of the entrance of the common bile-duct into the duodenum, and to the fact that the peristaltic wave of contraction is always preceded by a definite wave of relaxation. This wave of relaxation practically annuls the contraction of the sphincter around the entrance of the bile-duct into the duodenum.

(*b*) As a subsidiary factor, however, the contraction of the gall-bladder must be considered. In a fasting animal the gall-bladder is always distended with bile; in a recently fed animal the gall-bladder is practically empty despite the fact that the natural flow of bile is directly into the gall-bladder. If strips of gall-bladder are suspended in warm oxygenated Ringer a well-marked contraction is produced by adding a trace of pure secretin to the fluid. It appears, therefore, that secretin absorbed into the blood not only stimulates the pancreas to secrete, but also contracts down the gall-bladder, and thereby ensures the discharge of bile into the duodenum when a peristaltic wave of contraction passes from the pyloric sphincter down the small intestine.

## GENERAL CONSIDERATIONS.

As a result of the observations detailed in this lecture the following may indicate the sequence of events in the normal animal which lead to the orderly secretion of pancreatic juice. During the period of alimentary rest the liver continuously secretes bile which is stored in the gall-bladder. After eating, usually within 20 minutes, peristaltic waves of contraction pass down the intestine from the pyloric sphincter of the stomach. During the passage of these waves the intestinal muscle surrounding the entrance of the common bile-duct into the duodenum is relaxed. Bile therefore is forced from the distended gall-bladder into the duodenum. This bile is mixed with the contents from the stomach, which gives it an adequate reaction to ensure the absorption of bile-salts through the intestinal mucosa.

The bile-salts in their passage through the cells adsorb the preformed secretin contained in them and pass into the portal blood. The secretin causes the pancreas to secrete and the liberated bile-salt is carried to the liver to cause the secretion of a further quantity of bile. In addition the secretin in the portal blood causes the gall-bladder to pass into a state of tonic contraction, so that as it empties the pressure is kept up to ensure the direct discharge of secreted bile into the duodenum. The cessation of pancreatic secretion occurs therefore when bile is no longer discharged into the duodenum—i.e., when peristaltic waves of contraction cease to be initiated at the pyloric sphincter—and this probably occurs after the emptying of the stomach of food. The mechanism admirably illustrates the interdependence of the activities of the pancreas and liver, and correlates the digestive functions of the former with the metabolic activities of the latter.

## REFERENCES.

1. Popielski: Arch. f. d. ges. Physiol., 1901, lxxxvi.
2. Bayliss and Starling: Jour. Physiol., 1902, xxviii., 325.
3. Czerny: Quoted from Gamgee's Chemistry of the Anima Body, 1893, ii., 163.
4. Dodds and Bennett: Jour. Physiol., 1921, lv., 382.
5. Mellanby and Huggett: Ibid., 1926, lxi., 122.
6. Mellanby: Proc. Physiol. Soc., June 5th, 1926.
7. Mellanby: Jour. Physiol., 1926, lxi., 419.
8. Mellanby: Ibid.
9. Djenab: Berl. Klin. Wochenschr., 1917, liv., 524.
10. Halliburton and de Souza: Arch. Int. de Physiol., 1921, xviii., 231.
11. Cowgill and Deuel: Amer. Jour. Physiol., 1924, lxix., 568.
12. Willcox: Brit. Med. Jour., Dec. 2nd, 1922.
13. Mellanby: Jour. Physiol., 1925, lx., 85.

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THE following books are announced for publication by Mr. Henry Kimpton, of 263, High Holborn, London, W.C.:—"Orthodontics: An Historical Review of its Origin and Evolution, including an extensive Bibliography of Orthodontic Literature up to the time of Specialisation," by Bernhard Wolf Weinberger, D.D.S., New York, and published in two volumes of 1000 pages containing nearly 600 illustrations; "The Pathology and Treatment of the Inflammatory Diseases of the Nasal Accessory Sinuses," by Prof. M. Hajek, of Vienna, translated by Dr. Joseph D. Heitger; and "Nasal Neurology, Headaches and Eye Disorders," by Prof. Greenfield Sluder, Washington University of St. Louis.

# THE EFFECTS OF FEEDING ANTERIOR LOBE PITUITARY EXTRACT TO CHILDREN.

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THIS paper is a preliminary report on the effects of feeding anterior lobe pituitary extracts to children. The observations have extended over a period of one year. It has frequently been held that such preparations, when given by the mouth, are entirely inert, but the extracts we have used appear to influence both growth and metabolism, and in the former connexion at any rate corroborate the experimental work on amphibians, and more recent work on other animals.

In dealing with children, however, there are a number of factors one cannot control. In connexion with growth particularly it is impossible to say what the course of events might have been had treatment not been undertaken. The age at which different children begin to grow varies considerably, and the liability of even the most under-developed to sudden spurts is well recognised. In the cases mentioned in the present paper, however, the condition before treatment appears to have been either stationary or steadily deteriorating, and there were in all cases associated disturbances of metabolism which have also been improved by treatment.

### *Type of Case Investigated.*

The cases we have investigated fall into three groups—first, children with infantilism and defective growth; secondly, older female children with minor degrees of this condition and disturbances of menstruation; and thirdly, children with obesity of the apparently endogenous type.

In the first group, where the main features are infantilism and defective growth, anterior lobe feeding appears to have produced a stimulation of growth and bone development and an improvement in carbohydrate metabolism.

In the second group, where the main features are poor development with irregular and scanty menstruation, also associated with defective carbohydrate metabolism, anterior lobe feeding appears to have brought about an increase in the frequency and quantity of the menstrual losses with a similar improvement in metabolism. No instance has been noted, however, of the onset of menstruation occurring as a result of treatment in girls of this type with primary amenorrhœa.

In the third group, where the main feature is obesity of the endogenous type, we have not been able to observe any noticeable diminution of weight as a result of anterior lobe feeding. This is contrary to the usual statements. There does, however, appear to have been an improvement in carbohydrate metabolism as a result of treatment. The patients seem generally to have gained rather than lost weight. In females of this group a beneficial effect on menstruation has been noted, and this is probably a point worth taking into consideration, when the tendency of these children to periods of amenorrhœa is remembered.

It is obvious, of course, that in none of the groups that we have mentioned can a positive diagnosis of pituitary disturbance be made in the present state of our knowledge. In the absence of a tumour of the gland, there is no known means of making this diagnosis. In none of the cases of the present series was there any evidence of a pituitary tumour, and if there had been, little benefit could have been expected from anterior lobe treatment. On the other hand, the clinical features, the disturbances of growth and bone development, of genital function and carbohydrate metabolism, which are presented in these children, bear such a striking resemblance to those seen in pituitary disease, that one is tempted to explain them on a pituitary basis. There can be no absolute justification for this and none is offered. It is suggested only that these children are not normal from the point of view of development or function, and that the course of events can probably be modified to some extent and benefit derived from the administration of anterior lobe pituitary extract.

### *Functions of Anterior Lobe of Pituitary.*

Before going into the question of our results, brief reference may be made to the most recent experimental work in animals, both ablation and feeding experiments, as they throw additional light on the functions of this part of the gland. Paulesco,[1] Cushing,[2] Aschner,[3] and others showed originally that partial removal of the anterior lobe in animals leads to obesity, genital hypoplasia, and lack of development of the skeleton with undergrowth. Since then other observers have repeated these experiments, and although there is general agreement as to the lack of growth and genital hypoplasia, there has been some difference of opinion as to whether the operation is followed by obesity. Bell[4] did not find it, although in his experience it did follow the operations of compression and separation of the stalk. Recently Dott[5] has carried out a series of experiments in dogs, and also made a thorough review of the literature of this subject. Taking all the evidence into consideration, he concludes that a syndrome—namely, depression of temperature, lethargy, obesity, retardation of growth, and degenerative changes in the thyroid and genital glands—results from partial removal of the anterior lobe, or injury to its blood-supply, or from equivalent experiments. Dott and Fraser,[6] in a report to the Medical Research Council, have also shown that partial removal of the anterior lobe leads to disturbances of bone development. There is a decrease in epiphyseal activity with degeneration of cartilage and diminution of activity at the ossifying junction. They also found that by feeding their animals with anterior lobe extracts, an increase of epiphyseal activity with intense ossification at the epiphyseal junction took place. Radiological studies confirmed these observations. The effect of anterior lobe feeding on the general state of the animal was to accelerate growth and development. They suggest, however, that anterior lobe feeding does not produce gigantism, for though the animals grow faster and mature earlier, their epiphyses ossify sooner and the normal limits of stature are not exceeded. Positive results with anterior lobe feeding experiments have been reported by previous observers, notably Schafer,[7] Goetsch,[8] and Marinus.[9]

A considerable amount of work has also been done on the relationship between the thyroid gland and the anterior lobe of the pituitary, chiefly by Loeb,[10] Biedl,[11] and recently by Dott. The latter found in his animal experiments that partial removal of the anterior lobe was followed by a thyroid hyperplasia of some seven days' duration, with subsequent involutionary changes and hypoplasia. Anterior lobe feeding, however, produced no obvious changes in the thyroid histology. In another series of animals after thyroidectomy there was a hyperplasia of the anterior lobe of the pituitary to double the normal size. In this series no obvious changes in the pituitary body followed thyroid feeding.

As to the experimental work on the relationship between the anterior lobe of the pituitary and the genital glands, various observers, notably Paulesco, Cushing, Aschner, and Dott, have shown that partial removal of the anterior lobe in young animals leads to a syndrome of infantilism. The animals remain infantile in size, configuration, behaviour, and sexuality. The secondary sexual characteristics fail to develop. Dott has reported atrophy of the testicles following this operation, and in the female animals functional disturbances of the generative organs, as

the failure to come on heat. At post-mortem the uterus and tubes were found to be smaller than even the infantile size of the animal would warrant. Histologically, the ovaries showed definite degenerative changes. As a result of anterior lobe feeding, on the other hand, he found an acceleration of ovarian development, the follicles being much larger than in the control animals. Sexual function was also established at an earlier date.

From this brief review of the experimental work in connexion with the anterior lobe, it seems fairly reasonable to conclude that it is intimately connected at any rate with growth and genital function, leaving the question of obesity still for the present sub judice; also that, following its partial removal, degenerative changes occur in the thyroid and genital glands. It also seems clear that feeding experiments with anterior lobe extracts in animals give positive results on growth and bone development. From the results of treatment with these extracts in children, we are hoping to show that similar results can sometimes be expected.

### GROUP 1.—*Effect of Anterior Lobe Feeding in Infantilism.*

As illustrations of the first group of cases of children with infantilism, lack of development, and defective growth, details of two infantile boys, both 12 years of age, who have been treated with anterior lobe pituitary extract with considerable benefit and acceleration of growth are given.

1. F. V., aged 12. This boy was sent to hospital for lack of growth. This was first noticed at the age of 8, and since then his mother had kept accurate measurements of his height from time to time. Between the ages of 8 and 11 he grew at the rate of 1 inch (roughly 2½ cm.) per annum, but during the following year (11 to 12), the year before he came under treatment, his rate of growth fell to half an inch (1·25 cm.) per annum. This, of course, is considerably below the average rate of about 5 cm. per annum for a boy of this age.

When he was first examined by us he appeared to be a miniature of the so-called hypopituitary type of individual, rather plump, very under-grown and under-developed, but mentally alert. He formed a most striking contrast to his brother, who was only three years older but 2 feet taller and 4 st. heavier, and from the secondary sexual characteristics point of view most remarkably developed for a boy of 15. His mother was a small woman, his father of average build. The boy had apparently been always remarkably free from illness and there was no history or evidence of any of the usual complaints with which infantilism is generally associated. His height was 106 cm. The average for a boy of this age is about 140 cm. He was longer in the trunk than in the limbs, the symphysis vertex measurement being 54·5 cm., symphysis-soles 50·5. The sella turcica was about average size. The visual fields were normal. His bone development was considerably delayed, being that of a child of 7. The centre for the semilunar bone of the wrist should normally appear at the age of 5. In this boy the centre had not yet appeared in the left wrist, and was only just appearing in the right, when he was first brought to hospital at the age of 12.

Pituitary treatment was started in October, 1924. He has been given desiccated anterior lobe extract (Armour) by the mouth in gradually increasing doses, and for the second six months of treatment has been taking 15 gr. a day. In the course of a year he has grown 7·25 cm. as against 1·25 in the previous year. He has had no other treatment. His bone development has advanced to a corresponding extent. X ray photographs taken at intervals of about three months give a good idea of this. There are now very well-developed centres for the semilunar bones in each wrist, and the centre for the pisiform is also present. This does not appear normally until the twelfth year. The bones are still, of course, below average size, but as far as the appearance of epiphysial centres goes, bone development is now reported on as "about normal." During the year he has also gained steadily in weight. When he first came to hospital he weighed 3 st. 1 lb. At the end of his year's treatment his weight had increased to 3 st. 8½ lb., a gain of 7½ lb. —about 17 per cent. of his original weight.

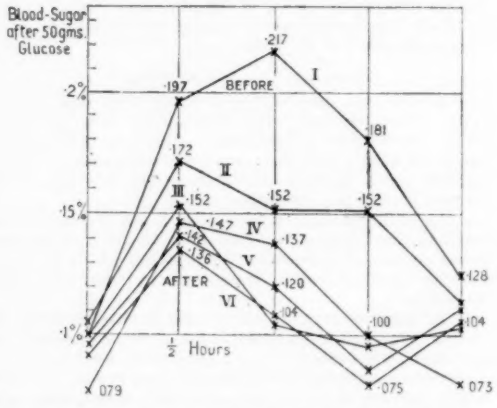
There has also been a considerable improvement in his carbohydrate metabolism as judged by the results of carbohydrate-tolerance tests (obtained by estimating the blood-sugar at half-hourly intervals after 50 g. of glucose). The whole question of the improvement of the carbohydrate metabolism after anterior lobe feeding is dealt with later in this paper. But in this case, as in the others, a preliminary decreased tolerance which we have regarded as a sign of inability to deal with sugar has become increased after treatment to a level above the normal.

This case has been recorded in some detail as the results have been so striking, and it is difficult to explain them except on the assumption that the anterior lobe extracts are active and have influenced metabolism. Previously the boy's condition was apparently steadily deteriorating, and there was no reason to suppose that any spontaneous improvement was on the point of taking place. This possibility, however, must not be entirely overlooked.

We have at the present moment a number of these infantile children under treatment with anterior lobe extract, but the majority were only started a few months ago, when we found that our trials were proving fruitful. It is early yet to make any definite statements as to increase in growth and bone development, but the carbohydrate metabolism appears to be following the course already described. One other infantile boy, however, was put on this treatment a year ago, after a period of observation and treatment for ten months with cod-liver oil. The result has been the same.

C. C., aged 12. This boy's height when he started treatment was 118 cm., the average for a boy of his age being 140 cm. His weight was 3 st. 10 lb., as against the average for age of 5 st. 6 lb. He was far below average in development, though his mentality was alert. His bone development was delayed, but to nothing like the same extent as in the first case mentioned. His sella turcica was about

CHART 1.




normal for a boy of his size. His Wassermann reaction was negative; his sugar tolerance considerably decreased. Treatment with anterior lobe pituitary extract was commenced in November, 1924. The dose was gradually increased to 15 gr. a day. In the course of a year he has grown 6 cm., a rate which is slightly in excess of the average for his age. During the previous ten months, whilst he was under observation and on cod-liver oil, he only grew 3 cm. The rate of growth has been almost doubled. His bone development has advanced but is still behind the normal, the centre for the pisiform bone not having yet appeared. His weight has increased to 4 st. 7 lb. since starting anterior lobe pituitary treatment. This is a gain of 8 lb. in the year. During the previous year he only gained 2 lb. Sugar-tolerance estimations show the same improvement which was noted in the first case. The actual curves before and after treatment are demonstrated in Chart 1. Again, it is difficult to account for the improvement, except on the assumption that the extracts are active.

### GROUP 2.—*Effect of Anterior Lobe Feeding in Undeveloped Girls with Menstrual Disturbance.*

As illustrations of the second group of cases of older female children with lack of development and menstrual disturbance, we would like to mention two examples, who derived benefit from anterior lobe treatment. They represent different grades of severity of the same condition. The first is an undeveloped girl of 19 with primary amenorrhœa. The second an undeveloped girl of 18 with scanty and irregular

menstruation. In the first, the more advanced case, menstruation has not commenced in spite of anterior lobe treatment for five months, although there has been a very definite improvement in metabolism. This has been our experience in other cases of this type, where puberty is considerably delayed. Anterior lobe extract does not appear to be effective in inducing menstruation under these circumstances. One supposes that the atrophic condition of the pelvic organs has become too far advanced. But in other ways these girls are markedly under-developed and poorly nourished. Their bone development is behind the average; their ability to utilise sugar, as judged by the results of sugar-tolerance tests, defective. And it is from the metabolic aspect that we have noticed improvement as a result of anterior lobe treatment. The details of this case are as follows:—

D. H., aged 19. This girl was sent for examination because menstruation had not yet started. Pelvic examination in the gynæcological department showed that the uterus was of the infantile type and extremely small. Her height was only 146 cm., her weight only 5 st. 8 lb. She is said to have stopped growing at the age of 10. Her bone development was considerably delayed, the epiphyses being still widely open. Her mentality was infantile. In addition to her menstrual trouble she also suffered from periodic frontal headaches which were accompanied by epistaxis. Her carbohydrate tolerance was markedly decreased. She has been treated on anterior lobe pituitary extract for five months with a considerable improvement in her general condition and metabolism. She has grown 2¾ cm. in that time—that is, at the rate of 5½ cm. per annum—growth previously being at a standstill for nine years. Her menstruation, however, has not started, though the periodic headaches with epistaxis have entirely ceased since the onset of treatment. Her weight has remained stationary. Improvement was shown in her sugar-tolerance curves.

The second case in this group illustrates the very considerable improvement in menstruation which results from anterior lobe treatment in the less advanced cases of this type. In these girls, after a normal or somewhat delayed onset, the menstrual losses tend to get more and more irregular and are finally followed by periods of amenorrhœa. These patients are also to some extent underdeveloped and poorly nourished. Their bone development is delayed and their ability to utilise sugar defective. As a result of anterior lobe pituitary treatment, the quantity and normal rhythm of the menstrual losses can to a large extent be re-established. This is accompanied by a similar improvement in metabolism.

The details of this second case are as follows:—

D. D., aged 18. Infantile type with poor development, started menstruating at the age of 13½, but the losses have always been irregular and scanty, occurring at intervals of from nine weeks to nine months. Immediately preceding treatment they had occurred at eight-weekly intervals on the last four occasions. Menstruation had always been accompanied by severe frontal headaches which were becoming steadily worse. On the last four occasions they had been of the migrainous type and accompanied by vomiting. She commenced treatment with anterior lobe pituitary extract and the dose was gradually worked up from 1 gr. three times a day to 5 gr. three times a day. She menstruated four times in the four succeeding months—on Nov. 12th, Dec. 15th, Jan. 18th, and Feb. 20th. The first period was accompanied by a characteristic headache with sickness, the second by a headache only, the last two were entirely free. She gained 5 lb. in weight in the four months. Her carbohydrate-tolerance test, which in the first place showed a considerable decrease, at this stage gave a normal result.

### GROUP 3.—*Effect of Anterior Lobe Pituitary Extract in Adolescent Obesity.*

In our experience there appear to be three main types of obese children. First, the type described by Fröhlich [12] in which obesity is associated with lack of growth, delayed bone development, and genital hypoplasia. A pituitary tumour is sometimes present in these cases, though in others the disturbance seems to be one of pituitary function only. Secondly, a type in which the onset of obesity is accompanied by a period of accelerated growth and advanced development of bone, and genital function, which is well up to the average or even in excess of it. We have suggested elsewhere [13] that in these cases there is a preliminary period of over-activity of the anterior lobe. They do not ultimately become giants, because their epiphyses fuse early and growth ceases soon after puberty. Thirdly, a type in which obesity is accompanied by bodily development of the eunuchoid type and genital hypoplasia. The epiphyses remain open far longer than in the normal person and the obesity tends to diminish to some extent as growth advances. These patients often become taller than the average and continue growing beyond the average age.

The two cases described in this paper belong to the second type of adolescent obesity. On theoretical grounds, of course, it would be in the first type (provided the disturbance was one of function only) that benefit might be expected from this treatment. Unfortunately, we have not met with a case of this type recently, and others have been treated with thyroid in addition to anterior lobe pituitary extract, as the latter does not reduce their obesity. The results consequently are of no value from the present standpoint. The giving of anterior pituitary to these two cases resulted in the same effect on the carbohydrate metabolism that we have previously described, but this method of treatment is not effective in reducing their obesity.

The first case in this group, S. E., aged 9, is a boy of average height and development, who had been gaining weight for about six months. When first seen, he was about a stone above the average in weight for his height and age. His sella turcica was small; his carbohydrate tolerance considerably decreased. For the past ten months he had suffered from fits of an epileptiform nature, occurring at intervals of from one to seven weeks. He was treated with anterior lobe pituitary extract, 1 gr. three times a day for a period of nine weeks, during which time he gained 9 lb. in weight. His fits occurred about once a week during this time. His carbohydrate metabolism, however, altered in a characteristic way, a previously low tolerance being considerably increased.

The second boy, D. L., aged 15, had developed obesity at the age of 10. The onset was sudden and accompanied by headaches. Previously he had been thin. When he was first brought to hospital he weighed 15 st. 2 lb., was above the average in height, and well developed. There was no evidence of pituitary tumour. His sella turcica was small, his visual fields and fundi normal. His bones were large, though the epiphyses were still unjoined, and at about the average stage of development. He was treated with anterior lobe pituitary extract, 15 gr. a day, for a period of two and a half months, and during this time he gained 9 lb. in weight. The sugar-tolerance curves, before and after treatment, show an increased tolerance still further increased.

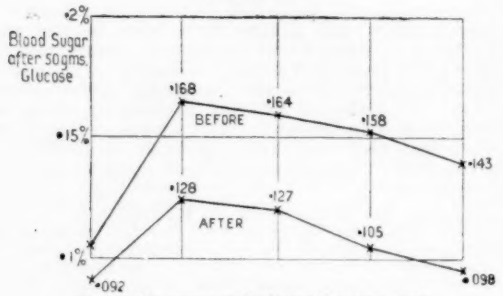
### *Effect on Carbohydrate Metabolism.*

The sugar-tolerance curves have been worked out according to MacLean's [14] method. The fasting blood-sugar was first determined, 50 g. of glucose given, and subsequent blood-sugar examinations carried out at half-hourly intervals for two hours. In the normal person the blood-sugar rises from a fasting level of about 0·1 per cent. to 0·17 per cent. or thereabouts at the end of half an hour; after this it falls to the normal level again at the end of an hour and a half. In the cases described in this paper the result has been different, the fall in the blood-sugar curve being gradual and delayed, and only reaching a level of about 0·14 to 0·15 per cent. at the end of two hours. It is assumed by the majority of investigators that the fall in the blood-sugar content is caused by the intervention of a storage mechanism, and that the oxidation of the ingested glucose is only a small factor. On this assumption the delayed curves seen in our cases would be considered to be the result of a defect in storage and represent a loss of power of the body to store sugar. This may or may not be so. We are hoping to obtain further information on this point from simultaneous examinations of the sugar tolerance and respiratory quotient. At the moment, however, our main object is to demonstrate that the sugar-tolerance curves of our patients alter very considerably as a result of treatment with anterior lobe pituitary extract, and apparently alter con-

sistently in the same direction. The curves after treatment are all low and suggest an increase of carbohydrate tolerance; that is, they appear to represent an increased ability on the part of the body to store a single dose of 50 g. of glucose. As a large majority of the patients gained weight on this treatment, there would appear to be some support for this view.

This general reduction in the blood-sugar readings following the administration of anterior lobe pituitary extract by mouth is represented in the chart by a composite curve obtained by averaging the results observed in nine cases before treatment compared with similar results in the same cases after treatment. (Chart 2.)

CHART 2.




Composite curve embodying the nine cases.

*Type of Case Suitable for Anterior Lobe Treatment.*

Apart from clinical considerations, which come first in importance in deciding whether a child is a suitable case for the use of anterior lobe pituitary extract, we would like to lay stress on the defective carbohydrate metabolism which we have found present in these children. Investigations of the sugar tolerance are of value both from the point of view of diagnosis and from that of control of treatment.

It is advisable to make X ray examinations of the bone development. Our usual routine is to examine the epiphyses of the lower end of the forearm and hand. Where the bone development is delayed some improvement may be expected from treatment. In actual practice, however, it is frequently found that some of the older children who are sent to hospital for defective growth have passed through a stage of accelerated growth with premature fusion of the epiphyses. Under these circumstances, of course, the possibility of further growth is out of the question.

*Conclusions.*

1. Feeding of anterior lobe pituitary extracts by mouth does appear to have some therapeutic value, although the number of cases which we are quoting is too small to allow of dogmatic statements. 2. In cases of infantilism, where the epiphyses are not already fused, these extracts appear of value in influencing growth. 3. They may prove of value in certain types of amenorrhœa associated with minor degrees of infantilism. 4. The effect of these extracts on the blood-sugar curve has been constant in all the cases which we have investigated, but in the present state of our knowledge we cannot attempt to give an explanation of this.

*References.*

1. Paulesco, N. C.: L'Hypophyse du Cerveau, Paris, 1908.
2. Cushing, Harvey: The Pituitary Body and its Disorders, London, 1912.
3. Aschner, B.: Wien. Klin. Rundschau, 1909, xxii., 1730.
4. Bell, W. Blair: The Pituitary Body, London, 1919.
5. Dott, Norman M.: Quart. Jour. Exp. Physiol., London, 1923, xiii., 241.
6. Dott, N. M., and Fraser, J.: Report to Med. Research Com., London, 1918.
7. Schafer, E. A.: Proc. Roy. Soc., London, 1909, Ser. B., lxxxi., 442.
8. Goetsch, E.: Johns Hopkins Hospital Bull., Baltimore, 1916, xxvii., 29.

(*Continued at foot of next column.*)

# SECONDARY JEJUNAL ULCERS

## AND THEIR RADIOLOGICAL DIAGNOSIS.

BY S. GILBERT SCOTT, M.R.C.S., L.R.C.P. LOND., D.M.R.E. CAMB.,

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PRIMARY jejunal ulcers, that is those ulcers which form primarily in the jejunum, not secondarily as the result of a gastro-enterostomy, are extremely rare, and a few only have been recorded. These, therefore, will not be considered.

Secondary jejunal ulcers, however, are a serious drawback to the otherwise valuable operation of gastro-enterostomy, or, more correctly, jejunostomy, for gastric ulcer. That they are a comparatively frequent complication cannot be denied. Most authorities agree that in the majority of cases their occurrence is the combined result of trauma and infection, but this does not explain satisfactorily why the jejunum is more susceptible to trauma and infection after operation. The acid gastric juices passing directly into the jejunum must, of course, play an important part in exaggerating a slight trauma. Unabsorbed sutures around the stoma are known to be one of the causes of ulceration, but this condition will not account for ulcers occurring well away from the site of operation.

Joekes, by means of the duodenal drainage-tube, has definitely established the fact that the normal contents of the jejunum in the human being are, if anything, slightly alkaline, but certainly not acid. Thus it would appear that damage to the lining mucous membrane of the jejunum is more than likely to occur when the very acid contents come in direct contact with it. Its structure is not acid-resisting as is that of the stomach. It seems, therefore, that the post-operative procedure of giving alkalines is sound, but it is doubtful whether this treatment achieves its object in all cases. The duodenal drainage-tube might be used to investigate this point.

There is another possible contributory cause. However carefully a patient may be fed while under observation, the time comes when he is left to himself, and may find dieting very irksome; even if he does not have an occasional "bust," it is more than likely he will eat unsuitable food, and this will probably be imperfectly masticated.

In the majority of cases examined radiologically, food is seen to pass almost directly through the stoma; the stomach, therefore, has but little opportunity of fulfilling its function as a digestive organ, consequently the jejunum and small intestine are at a great disadvantage, having to deal with food that has undergone little or no gastric digestion. Thus it is surprising that the jejunal mucous membrane does not more often resent this ill-usage. No doubt, with time, the jejunum can adjust itself to the new conditions and eventually become acid-resisting.

*The Rôle of Faulty Mastication.*

Faulty mastication of food, due to many causes, including carelessness and hasty eating, is, I believe, the primary cause of 90 per cent. of gastric ulcers.

> "A man eats and walks
> As fast as his thoughts!"

It needs but a small abrasion of the mucous membrane to form an ulcer, while a septic mouth, of course, renders the chances of bacterial invasion more probable. As with the skin, an unbroken surface can

(*Continued from previous column.*)

9. Marinus, C. J.: Amer. Jour. Physiol., 1919, xlix., 238.
10. Loeb, Leo Jour. Med. Research, 1924, xliv., 557.
11. Biedl, A.: Annals of Clin. Med. December, 1924, iii., No. 6, 444–458.
12. Fröhlich, A.: Wien. Klin. Rundschau, 1900, xv., 883.
13. Gardiner-Hill, H., Jones, I., and Smith, J. Forest: Quart. Jour. Med., London, 1925, 18, lxxi., 309.
14. MacLean, H.: Modern Methods in Diagnosis and Treatment of Glycosuria and Diabetes, London, 1924.

withstand infection while a pinprick may be sufficient to cause death.

This theory, however, does not hold in those cases where foreign bodies get imprisoned in the stomach. I have examined a mentally deficient patient who had over twenty articles in her stomach, including a meat hook, gas burner, keys, &c., yet at operation for their removal no ulceration of the mucous membrane could be detected. In the radiographic examination of the urinary tract I have found a sixpence that had been swallowed unknowingly in a Christmas pudding, some six months previously, yet the patient had no gastric symptoms whatever.

### *The Detection of Jejunal Ulceration.*

The radiologist, in the course of his gastric work, examines many cases where symptoms point to ulceration of the jejunum after gastro-enterostomy, but such ulceration is probably seldom detected. Personally, up to a few years ago, I had to content myself with merely reporting on the functioning powers of the stoma and with the examination of the stomach and duodenum; direct evidence of a jejunal ulcer was seldom obtained. This was owing to faulty technique; the large majority of these ulcers can now be accurately located.

The method employed is based on the same principles as those used for gastric work—i.e., systematic radioscopic palpation, details of which are given in the *Archives*, 1923, and in THE LANCET, 1922. Radioscopic palpation to most radiographers merely means prodding the abdomen after a full opaque meal. This has probably been done since the early days of gastric radiology, but will certainly not give the same degree of accuracy in diagnosis as the method about to be described, when efficiently practised and developed; it takes time and perseverance to become proficient in the art of palpation.

(*e*) The systematic examination of the *whole* stomach and duodenum must be emphasised—that is, the whitewashing process must start at the cardiac end, working down inch by inch and ending at the jejunum.

FIG. 1.

Method of palpation, gastro-jejunal angle (A).

Full control over the meal by this method takes some time to acquire. At first much unnecessary energy is expended, as many beginners will admit. As in golf, where muscle alone will not send the ba as far as a well-timed swing, so with palpation,

FIG. 2.

Gastric ulcer (A) and large jejunal ulcer (B).

FIG. 3.

Jejunal ulcer.

FIG. 4.

Large jejunal ulcer.

The main features of the method are as follows:

(*a*) A meal of a creamy consistency is used. I concocted, some years ago, a suitable barium cream for this purpose (now sold under the name of "Ramul").

(*b*) Only a small quantity (3 oz.) of this is administered at first. This is important, as a full meal, say of from 6 to 7 oz., will defeat one's object.

(*c*) By means of pressure of the hands on the abdomen, the opaque substance comes under full control.

(*d*) It is then possible to smear the cream over each section of the mucous membrane systematically. I have described this as "whitewashing" the interior of the stomach.

swing or knack is required to extract the full diagnostic value from the method.

When a case of suspected jejunal ulcer after gastro-enterostomy is being examined, certain modifications of this technique are required. The process is as follows:—

The patient is instructed to swallow one mouthful only of the opaque cream. This is watched passing down the œsophagus into the cardiac end of the stomach. It is then taken in charge by the palpating hands on the abdomen; and being controlled by this means, the emulsion can be carefully manœuvred through the stoma. The business of

the left hand is now to prevent, by gentle pressure, any of the meal passing further into the body of the stomach, for, if the pylorus is passed, shadows in the afferent limb of the jejunum will cause confusion. The business of the right hand is to dam up the emulsion in the first few inches of the efferent limb. This manœuvre is not always easy to accomplish. The opaque cream is now manipulated backwards and forwards through the stoma into the jejunum, and back again into the stomach. This whitewashing process will cause the opaque substance to adhere to any ulcer crater present, showing itself as a black fleck or spot which remains isolated after the displacement of the contents by pressure. This fleck, as in gastric ulcer, shows denser than the surrounding meal. The penetrating type of ulcer is more usual and is easier to detect, as a nipple or bud-like projection on the jejunal wall. This will also remain filled after displacement of the contents. Pressure of the right hand is now released, allowing the contents to flow on into the remainder of the jejunum. Six inches from the stoma may be considered the limit of jejunal ulceration. The remainder of the meal is now swallowed and the rest of the stomach examined as a matter of routine.

Ulcers may occur around the anastomosis or several inches from it in the efferent loop, usually just opposite the stoma itself. These may be multiple, and are seldom found on the afferent side. I have found that the majority of jejunal ulcers detected radiologically are in the angle formed by the greater curvature of the stomach and the efferent limb of the jejunum, (the gastro-jejunal angle, Fig. 1, A). The closer the ulcer is to the anastomosis (gastro-jejunal ulcer), the deeper it will lie in this angle. The true jejunal ulcer, usually of the penetrating type, is found as a rule projecting from the *inner* surface of the jejunum, well out of the gastro-jejunal angle. Deep pressure in this angle will in many cases help to demonstrate an ulcer.

Those unaccustomed to this examination will at first experience difficulty in detecting an ulcer among the numerous projections and isolated flecks that will be seen in the neighbourhood simulating ulcers, and the inexperienced are more apt to see ulcers that are not there than to miss the genuine lesion. The shadow cast by a full meal will mask or overlap the diagnostic features of ulceration, besides rendering full control of the contents difficult. In other words, the whitewashing process described will be almost impossible under this condition, and many small gastric ulcers are still being missed for the same reason. As in gastric work, radiographs alone are of little diagnostic value, most jejunal ulcers being extremely difficult to record on a radiograph, even after they have been located on the screen.

Under present conditions, radiologists should not give a diagnosis of an organic lesion of the intestinal tract unless it has been visualised on the screen—in other words, *direct* evidence must be forthcoming. The value of the examination is in no way lessened because a distinction between, for example, a simple and malignant ulcer cannot always be discriminated. The hand and eye properly trained are of greater diagnostic value than radiographs, and direct evidence of *gastric* lesions in nearly 100 per cent. of cases is, I believe, possible in the near future if this fundamental fact is but thoroughly grasped and recognised.

# Clinical and Laboratory Notes.

## ON THE USE OF WEDGES FOR ELEVATING THE LOIN IN GALL-STONE OPERATIONS.

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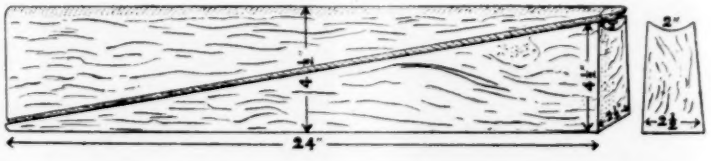
FOR nearly 20 years I have been in the habit of using wooden wedges for elevating the middle of the body in gall-stone operations to secure the Mayo-Robson position. The wedges were originally devised for the elevation of the loin in operating on the kidney, hence the name "kidney wedges" by which they have come to be known in Newcastle. I would not have thought of bringing this device before the notice of the profession had it not been that many friends, who also use the wedges, are enthusiastic about their utility.

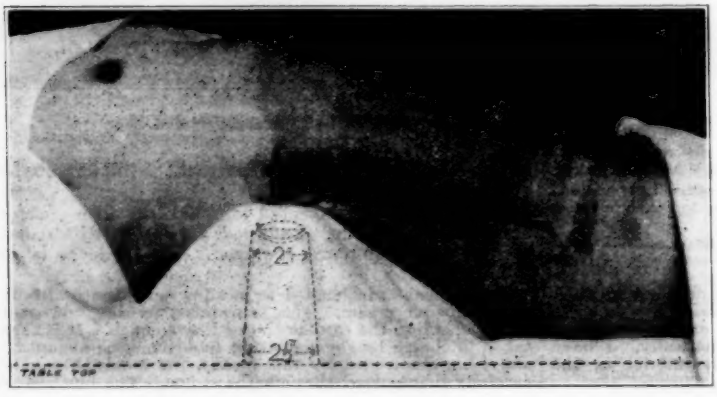
The wedges which I use are made of soft wood and are of the shape and dimensions indicated in Fig. 1.

FIG. 1.




The principle involved is simple. The wedges slide on each other, and are passed beneath the patient, one from either side of the operating table, so that when both are in position the patient is elevated by their conjoined height. The groove in the top of the bottom wedge, and the under-surface of the upper wedge, ought to be very smooth, and it is a good plan to have this part of the wedges kept polished with some kind of furniture cream. One of my difficulties has been to prevent this smooth surface being destroyed by the frequent washing or other cleansing to which theatre equipment is subjected on Sunday mornings!

FIG. 2.




The mode of application of the wedges is simple but important; for if they are not properly used, muddle ensues, and the wedges are apt to be discarded as clumsy and unsatisfactory. As a matter of fact, when properly used, they are eminently satisfactory in every way. When the stage of the operation arrives at which the surgeon wishes the loin to be elevated, the nurse takes the grooved wedge and passes it between the bottom sheet of canvas on which the

patient lies and the top of the table. To do this properly the canvas is lifted up a little until the point of the wedge is introduced. The nurse now lays hold of the canvas with both hands and presses with her body against the base of the wedge, thus easily pushing the latter on until its point appears at the other side of the table. The second wedge is then introduced in a similar way from the opposite side, its rounded surface being applied to the groove on the upper surface of the thin end of the wedge first introduced. When it, in turn, is pushed home, the body of the patient is elevated by 4½ inches, which is the conjoined height of the wedges when assembled (Fig. 2).

The process can be more easily carried out by two persons, one working from either side of the table. When one person carries out both manœuvres, the surgeon must press against the wedge first introduced with his body, so as to prevent it getting displaced while the second one is being introduced from the other side. The insertion of the wedges takes far less time to carry out than to describe. If either is not properly introduced, or if one or other turns on its side, or is otherwise disarranged, then it, or both, should be withdrawn and reintroduced. It is never necessary to lift the patient in order to put in the wedges, and, in fact, the principle involved is grossly violated by any such attempt.

With the wedges which I at present use I have never known any displacement occur after they have once been properly introduced, but I have known a narrower wedge fall on its side. If that happens, it is very easy to withdraw both and to commence the process again. The wedges have the advantage that they can be introduced at any part of any table at any stage of an operation, and can likewise be easily withdrawn when the incision is about to be sutured. The rubber pads which have recently been introduced for placing on operating tables for the comfort of the patients have rather complicated matters; but we find that the wedges are as easily used as before if a strong canvas cover is placed between the table and the rubber pad. The wedges are then introduced between the canvas cover and the top of the table as before. These wedges are made and stocked by Messrs. R. McQueen and Son, Newcastle-upon-Tyne.

## VESICAL CALCULUS WITH NUCLEUS OF PARAFFIN WAX.

BY ERNEST H. SHAW, M.R.C.P. LOND.,
DIRECTOR OF CLINICAL PATHOLOGY AND PATHOLOGIST, ROYAL NORTHERN HOSPITAL; AND HONORARY PATHOLOGIST, HORNSEY COTTAGE HOSPITAL.

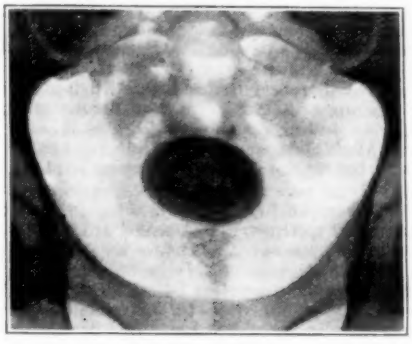
THE following case is reported on account of its rarity and general interest. The specimen consists of a calculus, the centre of which is occupied by a mass of paraffin wax. The stone was removed by operation from the urinary bladder by Mr. Kenneth Walker, and the writer is greatly indebted to him for his permission to report the case.

*Clinical History.*—L. P., aged 19 years (male), admitted to the Royal Northern Hospital on August 11th, 1925, under the care of Mr. Kenneth Walker, complaining of burning sensation on micturition.

*Past History.*—October, 1924, patient first noticed burning sensation on micturition, and slight frequency, and, a month later, he observed a brownish colour of the urine. He then consulted a doctor. February, 1925, pus and *B. coli* were found in the urine, and vaccine treatment was undertaken. No improvement occurred, and about April the urine was examined for tubercle bacilli with negative result on two occasions. Another specimen was examined by the same pathologist, who used the Ellerman and Erlandsen method, and tubercle bacilli were found. He verified this on two subsequent occasions. The specimens of urine were collected with aseptic precautions, but *not* through a catheter. The patient subsequently underwent open-air treatment for some months. The youth stated that three years ago while boxing he was hit on the "kidney region," and afterwards passed "blood."

*Present Condition.*—The burning sensation is still present, but much less than last year. It is felt just above the pubes. The stream stops suddenly occasionally. Physical examination of chest and abdomen revealed nothing abnormal. X rays showed a large stone in the bladder. Urine normal; no T.B. found; two specimens examined.

FIG. 1.



Calculus in the bladder.

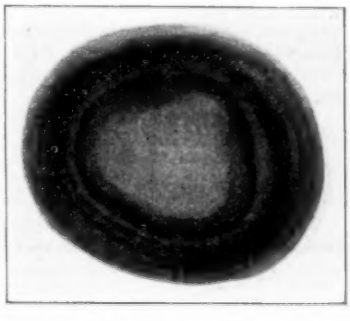
*Operation* (August 14th, 1925).—Suprapubic cystotomy. The stone was removed from the bladder, and no evidence of tuberculous disease was discovered. After drainage with a rubber tube, the wound healed and the patient was discharged on Sept. 9th.

*Description of Stone.*

Flattened, ovoid in shape, measures 4·3 × 3·6 × 2·6 cm. Weight 32 g. The surface is finely granular, whitish in colour with patches of light brown deposit. On section the stone shows concentric layers of hard, somewhat brittle material, the centre being a solid mass of semi-translucent wax, roughly oval in outline, and measuring 1·9 × 1·2 cm. From within outwards the layers of stone are: a layer of white, soft, brittle material around the wax, and then several layers of hard light brown stone alternating with soft white rings. Surrounding these rings the outer part of the stone is white and hard for the most part, but soft crumbling patches are present in places.

*Chemical Composition.*—Mr. H. Skinner kindly examined the stone and made the following report:—Stone: Composed almost entirely of phosphates. The darker rings contain a little oxalate of lime in addition to phosphates. Nucleus: Composed of pure paraffin wax with a melting point of between 53–54° C. Burning gave the characteristic smell of paraffin wax. In xylol the wax dissolved quickly and completely. The wax was easily softened and moulded into any shape by the finger and thumb. A suggestion that the nucleus might be adipocere was disproved by the above findings, for this substance has a melting point between 61–67° C., and is easily dissolved or emulsified by NaOH. This chemical has no effect on the wax.

FIG. 2.



The structure of the calculus after dividing it with saw.

The identity of the substance forming the nucleus having been established, it became necessary to explain its presence there. The patient would not give any information on this point, but there can be no doubt that it was passed along the urethra: how long before the stone was removed it is impossible to tell. Mr. Walker states that wax has been found in the male bladder in other cases, and patients have confessed to having collected candle "drippings," moulded them into shape and pushed the material into and along the urethra. Mr. Skinner states that nearly all modern candles are made of

paraffin wax. Tallow candles are not used so much as formerly.

*Commentary.*

On reviewing the clinical history, it will be noted that the pathological findings in the urine reveal apparently three phases: (1) pyuria with infection by *B. coli*; (2) the same and tubercle bacilli; (3) normal urine with stone in the bladder.

As the urine was free from pus and organisms at the time when the stone was removed, and the bladder wall was found to be normal, an interesting field for speculation is opened up in regard to the presence of tubercle bacilli found in the urine during the second phase. Four possibilities present themselves: (1) a tuberculous lesion of the bladder wall had healed without visible scarring; (2) one or both kidneys are tuberculous; (3) contamination; (4) mistaken identity.

(1) Must remain just a possibility; (2) no evidence to prove this during the patient's stay in hospital; (3) contamination of the urine by tubercle bacilli during its collection need only be mentioned to be dismissed; (4) the question of mistaken identity is, however, one which has to be considered, as all workers in clinical pathology are aware of. The smegma bacillus at once occurs to one's mind, and it seems possible, if not probable, that this was the organism found in the urine in what has been labelled the second phase of the case. As the urine was not collected through a catheter, the possibility of smegma bacilli being included in the urine passed through the meatus must be taken into consideration.

Incidentally, the writer wishes to observe that the idea that smegma bacilli lose the red colour deposited by carbol fuchsin on well washing the films with methylated spirit is not always reliable. He has repeatedly experimented with films of the smegma bacillus—treated them with acid followed by spirit and found the bacilli stained a bright red. Another point which is of importance to the laboratory worker is the curious fact that *B. coli*, when lying on loose epithelial (squamous) cells in the urine, seem to have an affinity for carbol fuchsin. It is not very uncommon to see red bacilli on a squamous cell with large numbers of others stained blue (with Löffler's stain) in the other part of a field. This apparent acid-fast property of *B. coli* is no doubt due to incomplete washing in acid and methylated spirit, but it arouses one's curiosity and causes speculation as to whether these bacilli have absorbed a certain amount of fatty material from dead and degenerated epithelial cells on which they lie.

It will be remembered that tubercle bacilli are said to possess a certain amount of fatty substance in their covering or body, and this is given as an explanation for their acid-fast property.

To continue with one's speculation over this curious and interesting case, might the *B. coli* remaining in the bladder for some time have absorbed some of the paraffin wax, and in this manner been able to retain the carbol fuchsin stain like the tubercle bacillus?

The accompanying X ray photographs show the position and structure of the calculus.

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THE PRINCE OF WALES'S INTEREST IN HOSPITALS. During the past fortnight the Prince of Wales has been showing active interest in hospitals and their work. He attended the centenary celebrations at the West Herts Hospital at Hemel Hempstead, and laid there the foundation stone of a new maternity ward. Later on he visited the Isle of Wight County Hospital at Ryde, where he presented Mr. B. O. Cochrane with a silver model of a galleon on behalf of the staff of the hospital, of which he has been treasurer and chairman. At Ventnor he opened the nurses' home at the Royal National Hospital for Consumption and Diseases of the Chest, of which His Royal Highness is patron. On his return to Portsmouth, to be formally admitted to the freedom of the city, he visited the Royal Portsmouth Hospital, to which he presented the masses of roses with which he had been pelted during his progress through the streets.

# BRITISH MEDICAL ASSOCIATION.

## ANNUAL MEETING AT NOTTINGHAM.

(*Continued from p. 198.*)

## REPRESENTATIVE MEETING.

MONDAY, JULY 19TH.

*Practitioners' Fees in Municipal Maternity Hospitals.*

THE Chairman of the Medico-Political Committee, Dr. J. W. BONE, moved on behalf of the Council:

That where the local authority makes provision for the institutional treatment of maternity cases, this should be mainly or primarily for serious cases of antenatal complications, for cases requiring major obstetric operations, for cases where isolation and treatment of septic infection is specially indicated, and other cases where the home conditions are unsuitable or dangerous for confinements.

This merely made what had already been resolved at Bath the policy of the Association. Dr. BONE also proposed:

That where a general practitioner is called upon to render assistance at a confinement in a municipal maternity hospital, the fees payable to such practitioner should be in accordance with the scale of fees approved by the Ministry of Health for the payment by local supervising authorities to medical practitioners called in on the advice of midwives under Section 14 of the Midwives Act, 1918.

To this Dr. R. FORBES proposed an amendment on behalf of Gateshead:

That the whole of the last clause be deleted and the following substituted therefor: The local authority shall be responsible to such practitioner for his fees until such time as the patient is removed from the hospital.

He pointed out that under Section 14 of the Midwives Act, 1918, a medical practitioner could obtain payment when called in by a midwife only up to the twenty-eighth day. It was quite conceivable that complications might arise so that attendance was necessary for a much longer period.

Dr. BONE said that the point was a good one, and he was in full sympathy with it, but it was necessary to bargain and to deal with other people. Already a good scheme and good remuneration had been secured, and it was not easy to remove such a limit at a time when economy was the idol of Government departments. He suggested that the matter be referred to Council. Dr. Forbes accepted this.

Dr. C. F. T. SCOTT (Willesden) proposed a verbal emendation:

That the words "not be less than" be substituted for the words "be in accordance with,"

which was carried.

Dr. BONE proposed and carried the recommendation of Council:

That where a consultant is called in by the practitioner in charge of the case the fee should be for the consultation not less than 3 guineas and for a major operation not less than 10 guineas.

Dr. FORBES said that Gateshead felt that a consultant spent less time and had less trouble in a municipal hospital, where everything was prepared for him, than in a private house, and they wished to make the fee £2 2*s*. It was a very important point, and in some areas this might be too little; there must be a revision on a territorial basis.

Dr. E. W. MASTERMAN (London) said that it would be very undesirable to have a different arrangement in municipal maternity hospitals and Poor-law hospitals, as in many places the former were being started in connexion with the latter. He suggested referring the matter to Council and inserting the words "and mileage as required," but Dr. BONE said he refused to listen for a moment to any alteration; the scheme had been carefully considered and the fee was reasonable. The "territorial" argument was a fallacious one, and would be fatal to central work.

Dr. E. I. CLAXTON (Liverpool) remarked that the meeting had already agreed that the Council should consider a scheme for yearly agreements for consultants in Poor-law hospitals. He wished to put the municipal

maternity hospitals on the same basis, and quoted a small local hospital where a consultant was retained at an annual fee of £21; in some years he had no work at all, in others he would have a few operations. Dr. Claxton proposed:

That a local authority may retain for a municipal maternity hospital the services of a consultant on a yearly salaried basis.

Dr. R. C. BUIST (Dundee) said there were so many local difficulties that the question could not be settled for everyone, and proposed to refer the matter to Council.

Dr. PETER MACDONALD (York), seconding this, quoted a case where the local authorities had appointed a consultant and had asked, and taken, the advice of the local division of the B.M.A. on the form and remuneration of the appointment. That sort of local option was very desirable.

The meeting agreed to refer the question to Council.

Dr. BONE proposed on behalf of the Medico-Political Committee:

That the Representative Body strongly objects to the practice adopted by some public bodies of asking medical practitioners to tender for appointments, and that advertisements of such appointments be not published in the *British Medical Journal*.

In answer to questions he explained that by "tendering" he meant advertisements in which the applicants were asked to state what salary they would accept. The motion was carried, as was the further recommendation of Council:

That, having reviewed the whole situation as regards complaints and charges in courts against medical practitioners, the Representative Body does not consider that it is necessary for the Association to take any action in the matter of such complaints and charges.

*Factory Medical Service.*

Dr. BONE moved on behalf of Council:

That a medical service of occupational hygiene should form no exception to the Association's policy that the administration of all health services should be unified first centrally and then locally.

He said that the matter had been very fully discussed by a joint committee and there had been no dissentient voice raised against this proposition.

Dr. F. W. DEARDEN (Manchester) asked what would be the attitude of the Association to a Factory Bill, among the provisions of which was a proposal to hand over any part of the certifying factory surgeon's duties to the local authority as at present constituted? Dr. BONE replied that the Association would not agree to such provisions, and the motion under discussion covered that eventuality. It was carried.

*Officers at Orthopædic Clinics.*

The Council recommended:

That for part-time work at ordinary orthopædic clinics the remuneration of the medical practitioner should be £2 12*s.* 6*d.* per session of not more than two hours, provided there is a limitation, to be agreed locally, of the average number of new cases to be seen in each session.

It was proposed by the CHAIRMAN, in the absence of Dr. E. SOLLY (Harrogate), and seconded by Dr. D. ROXBURGH (London):

That the words "not less than" be inserted before "£2 12*s.* 6*d.*"

Dr. H. B. BRACKENBURY pointed out that these words did not occur in any other corresponding clause in the scheme. Dr. BONE said that if the whole schedule was to be altered it should be done deliberately and not as a side issue. The amendment was lost.

In reply to a question as to why the fee should be greater than that given to pensions doctors and other medical officers of clinics, Dr. BONE pointed out that it was a specialist service and the fee corresponded with that for two other specialist clinic services—viz., ophthalmic and anæsthetic work. The motion was carried.

*Royal Commission on Local Government.*

The Deputy Chairman, Dr. C. O. HAWTHORNE, took the chair, while Dr. BRACKENBURY spoke to the motion proposed by the Chairman of the Medico-Political Committee:

That the following recommendation of Council be adopted: That the Memorandum of Evidence submitted to the Royal Commission on Local Government on behalf of the Association be approved.

Dr. Brackenbury said that there were certain fundamental principles laid down by the Association which lay at the basis of the memorandum. The first was that health services should be separated as completely as possible from other administrative services which were not of a health character—for instance, that the health functions of Poor-law guardians should not be complicated by relief work. The second was that when these health services had been separated they should be combined as far as possible with all other health services, so that all the health services of the country, centrally and locally, should be under one form of administration and under one local authority. The question arose as to what body and area was most suitable for this authority. The ideal was that all present divisions should be swept away and the country parcelled out afresh into areas, each with a large town as centre. This was unattainable, so the suggestion made was that all health authorities should be compelled so far to work together as to approach as nearly as possible the ideal of unification. The machinery by which this should be done was a fundamental point. Those who had drawn up the memorandum believed that, as had been done under the Education Act, the best way would be to have a statutory health committee of a composite character, elected by local doctors, to advise and report, without touching finance. This committee would have on it representatives of the medical practitioners and such other bodies as were experienced and interested in the health services of the local area. Unification of health administration could not be obtained if there were in any part of the country a superior and a minor health authority; the memorandum therefore looked with disfavour on the proposal of the Ministry of Health to give to county councils supervision and, largely, control of all health matters in the hands of urban or rural districts or in county boroughs within their area. He instanced a borough like Willesden, of some 200,000 inhabitants, which had been the successful sanitary authority for many years. The county council would have had no experience whatever of sanitation, and the transference to it of supervisory authority must lead to friction, overlapping, disturbance, and inefficiency. Rural areas with scattered and sparse population and few funds were more difficult; a satisfactory service might be attained either by giving the county council a supervising and controlling position or by making the small rural area give up its authority to the county council which would thus become *the* health authority for the rural area. The memorandum preferred the latter.

Dr. J. MIDDLETON MARTIN (Gloucestershire) proposed an amendment:

That the following words be added, "but that further consideration of the matter by the Council be given, if possible, before any Parliamentary or political action be taken."

He said that in Gloucestershire the health services had been successfully put in the hands of local practitioners, and he was in favour of this, but took exception to any extension of their representation on the new health authority. It had been found that the opinion of a medical advisory committee, presented as a considered report, had much more weight than the individual voices of members of the executive body. People were too inclined to think in terms of London, which required exceptional treatment; he suggested making the county council the responsible authority, with exceptions where desirable.

Dr. R. A. LYSTER (Hampshire) seconded the amendment, and said that it was outrageous for the meeting to endorse a complicated memorandum which would commit the Association to a conflict with the Ministry of Health on a subject only remotely connected with medical affairs. The great urban

boroughs could safely be left to look after themselves. While the memorandum was very good in some places, it betrayed an amazing and ludicrous lack of knowledge in some of its points.

Dr. BRACKENBURY replied that Dr. Buchan had described the memorandum as the best and clearest and most satisfactory statement on the subject he had ever read or hoped to read. He challenged Dr. Lyster to mention any statement that revealed lack of knowledge. The memorandum expressly recognised London as exceptional. The term "county council" must not be reserved for rural councils.

Dr. E. WILLIAMS (Cardiff) said that there were enormous variations in rural England; some services were essentially large group services, while others were essentially local. The impetus to Poor-law reform was not any desire for unification of medical services, but was financial.

Dr. R. P. GARROW, medical officer of health for the non-county borough of Chesterfield, pointed out that large urban district councils were not confined to London. He asked the meeting to accept the memorandum in its entirety, the most essential point being that the county council should not have supervision over those large urban districts or boroughs.

Dr. A. T. JONES (Glamorgan) said that Dr. Williams might represent Cardiff, but not the large industrial districts of Wales, and he considered it would be quite impossible for the Glamorganshire County Council to administer these things in its county.

Dr. H. G. DAIN (Birmingham) supported the amendment, saying that before the memorandum received the whole-hearted support of the profession the general practitioner would want to see more clearly what his position was going to be under the reconstituted authority. The suggestion now was that the local authority's health department, which had grown up for a very definite purpose, should absorb a large amount of the clinical side of medicine with which it had hitherto had little to do. Where would the insurance practitioner stand when employed for at least one-third of his practice by the local health authority? Many general practitioners would object to being employed by the medical officer of health or the present health committee with its traditions and officers; this might well cause a revolution.

Dr. J. ROBINSON (Manchester) remarked that all the biggest urban district councils were outside London; he feared that overlapping of the duties of the medical officer of health under the local authority and the county medical officer would lead to friction and financial loss; there should be complete unification.

Dr. EUSTACE HILL said he wished to plead strongly for a reconsideration of the memorandum; he was convinced that the Association was on the wrong lines. He welcomed any scheme to improve the present administration, which was rotten; the proposals of the Ministry of Health allowed the county council to delegate anything they liked, which would cover such cases as Willesden. They could divide the county into areas, appoint additional medical officers of health, and transfer to them the duties at present done centrally, such as tuberculosis and venereal disease work. He considered that the memorandum had been drawn up by someone who was not thoroughly conversant with the conditions.

The amendment was carried.

Dr. BRACKENBURY, speaking to the substantive motion as amended, said that Dr. Eustace Hill was wrong in saying that county councils could delegate their powers. The confusion arose because in the Minister's proposals county councils were given supervision over all matters of health within their areas, but the only powers they could delegate were those transferred to them from the Poor-law guardians; they could not delegate their supervisory powers. He had been asked the relationship of this memorandum to a State medical service. It was evident that local authorities must in future take a greater interest in health administration and clinical questions, must employ local private practitioners in all the auxiliary services and clinics as far as possible, and not work them through whole-time medical officers. In this way the proposed rearrangements would act as a strong bulwark against any State medical service.

The motion was carried, and Dr. Brackenbury resumed the chair.

### *The B.M.A. and Parliament.*

Dr. BONE, in proposing the adoption of the remainder of the annual report under "Medico-Political," said that there was some difficulty in getting the views of the Association expressed in Parliament. There would be no success until the fund for supporting the B.M.A.'s own representatives was continued.

Sir RICHARD LUCE, speaking as a member of the Committee of Medical Members of Parliament, explained that that Committee practically never took any coördinated action, as it contained representatives of all parties, who could rarely be unanimous. There were three Bills at present on the table of the House of Commons. The first, referred from the House of Lords, dealt with the reform of the Coroners' Law, and already contained many recommendations in accordance with the policy of the Association. The Government had conceded the payment of resident medical officers for post-mortem examinations, and that coroners should be either doctors or lawyers. The profession still wanted improvement in the rates of pay for evidence in the coroner's court, and an amendment was to be brought forward on the lines desired by the Association, except that a combined fee of 4 guineas (instead of 4½ guineas) was to be recommended for the post-mortem examination and relative evidence. There was sure to be great opposition. The coroner could already order and pay for an autopsy without calling the doctor in evidence, and it was now suggested that he should be entitled to ask for a report and, if this was wholly satisfactory, dispense with an inquest. For such a report a fee of half a guinea was suggested. The second Bill was Colonel Fremantle's on the registration of births and deaths. As this was a private member's Bill it could not carry any financial consideration. For this reason it was not possible to push the B.M.A. policy of a compulsory visit to the deceased before granting a certificate. The Bill had gone a long way, but was opposed by a section who wanted to compel the doctor to make the visit without fee. The notifications would be by post and private. There was also a proposed regulation as to the time a body might be left unburied.

It was proposed by Dr. P. HAMILL, on behalf of the City Division, and carried:

That the Representative Body is of opinion that all medical officers—honorary or otherwise—of hospitals or rate-aided institutions be entitled to receive fees on the same scale as other practitioners for post-mortem examinations and attendance as medical witnesses at inquests.

Dr. BONE remarked that this was already the policy of the Association.

Dr. ROXBURGH asked whether the death certificate proposed was to be private and privileged. If not the Registrar-General would not get accurate information, and it was most important that he should.

Dr. BONE replied that a private certificate had been part of the policy of the Association for years, but would involve considerable expense, and it was essential for the passing of the Bill that it should not cost money. The present certificate represented an attempt to get at no cost a semi-confidential registration of the actual cause of death. It was not open to the relatives, but placed in a sealed envelope for the Registrar. The only difficulty would arise if an insurance company required to know the cause of death and obtained permission to get a copy of the certificate. The Association had neither pressed nor opposed it.

### *Registration of Nursing Homes.*

Dr. BONE proposed that the Memorandum of Evidence submitted on behalf of the Associatiou to the Select Committee on the Registration of Nursing Homes be approved.

Sir RICHARD LUCE said that it would be bad policy to expect that medical men should be treated on different terms from other owners of nursing homes. Evidence before the Committee had proved that there was grave reason for investigation and registration, and the fact that members of the medical profession were under the control of the General Medical Council was not much help as it was most unlikely that patients would ever charge a medical man before that body.

*Drug Addiction.*

In proposing the adoption of the remainder of the supplementary annual report under "Medico-Political," Dr. BONE drew attention to the report of the Departmental Committee on Morphine and Heroin Addiction, the recommendations of which corresponded very closely with the desires of the Representative Body as expressed at Bath.

Dr. C. O. HAWTHORNE said that it was a very serious thing that it had now become law, partly on the representation of the Representative Body, that a practitioner who was believed to have offended against the Dangerous Drugs Act could be haled before a special tribunal of three doctors with a legal assessor and not before the ordinary courts of the land. This tribunal could recommend the Home Secretary to remove his name from the list of those permitted to prescribe these drugs. There was no guarantee that the evidence could be challenged by a legal representative of the accused. This arrangement, on the one hand, offered the doctor benefits which it did not confer on other citizens, such as pharmacists, who were even more intimately concerned with the Act, and, on the other hand, removed him from the solid protection of the English law.

Dr. E. K. LE FLEMING (Wimborne), speaking as one who had given evidence before the Committee, pointed out that it had been presided over by Sir Humphry Rolleston, who was not likely to neglect the best interests of the profession. This clause of the recommendations was dealing with a particular case, the doctor who had become a drug addict, and hitherto such a man could only be allowed to go on until he came before the courts. The Committee thought that if it were possible to interpose a tribunal with a strong medical element which would protect him from himself and protect his patients by preventing him from prescribing dangerous drugs in excess, it would be acting in the best interest of both.

Dr. E. R. FOTHERGILL (Brighton) drew attention to what he called a most objectionable position. In a recent case Sir Travers Humphreys had defined justifiable use of dangerous drugs as a prescription given by a duly qualified medical practitioner when required for medical treatment. This meant that the onus of proof that the drug was given in the course of medical treatment lay on the prescriber, and the whole question of the freedom of the profession to treat patients could come under the jurisdiction of the Home Office.

Dr. BONE replied that Dr. Fothergill's anxiety was due to incomplete information. It was clearly specified that there were certain circumstances in which it was perfectly legitimate to use these drugs: where their withdrawal would lead to serious symptoms such as could not be treated under the conditions of private practice, and for those people who could live comparatively normal and useful lives so long as they took a certain quantity of their drug of addiction. There was ample evidence that certain doctors were practically selling these drugs to addicts without attempt to cure, and the legislation was designed to stop that sort of thing. The Committee had been advised by the great legal experts of the Government and believed that the clause effected this end.

*Certification under the Workmen's Compensation Act.*

Dr. G. F. SHEPHERD proposed on behalf of South Shields and Tyneside:

That the Representative Body is of opinion that, while the obligation of certification of injury under the Workmen's Compensation Act is in the first instance placed upon the employer and there is no obligation whatever under the National Health Insurance Acts to provide compensation certification, nevertheless it is often found that the employer, or his agents, or his covering company, requires initial certification either at no expense or wrongfully at the expense of the injured person, and that it is therefore advisable that a uniform and universally used form of certification be employed in all cases in order to conform to the law; and that the Council be instructed to take such steps as may be necessary to bring a uniform certificate and system into being at the earliest possible moment.

He said that the system of giving certificates for nothing was thoroughly bad. The whole question of certification remained as it was in 1913 and should be gone into at the same time.

Dr. BONE replied that a solution of this problem had been sought for a long time. The bodies concerned were chiefly large insurance companies, and it had been found that there was an Accident Offices Association which represented them all. The Council was in communication with this organisation about this matter. There were difficulties, as in some districts the doctors had acquired the habit of issuing sixpenny certificates and did not wish to be deprived of this arrangement. He suggested referring the matter to Council, which was agreed.

*Antenatal Work and the Midwives Act.*

It was proposed by Dr. T. R. DAVIES, on behalf of South-West Wales:

That the Council be instructed to consider the advisability of pressing for the amendment of the Midwives Act, 1918, in order to secure that local authorities be made responsible for payment for antenatal work.

It was decided to refer the matter to Council for consideration.

*Medical Defence.*

Two motions, urging that the time had come for defence societies to issue policies covering a principal for the acts of his assistant or locum tenens, were withdrawn, on the announcement by Dr. A. LYNDON (Hindhead) that the two great medical defence societies were very conscious of the growing and legitimate demand made by their members for such protection, and the following decisions had recently been arrived at by the Medical Defence Union:—

(*a*) That the Medical Defence Union will defend the principal, if he is a member of the Union, should action be taken against him arising out of the acts or omissions of a locum tenent, even if the locum tenent is not himself a member of any defence society;

(*b*) That a reciprocal arrangement had recently been entered into between the Medical Defence Union and the London and Counties Medical Protection Society, whereby each society will defend its own member in an action arising out of the acts or omissions of an assistant or locum tenent, who is a member of the other society, as if the assistant were a member of the same society as the principal;

(*c*) That as regards a subordinate medical officer of a hospital, the same procedure will apply in the case of members on the staffs of hospitals against whom actions are brought arising out of the acts or omissions of duly appointed subordinate medical officers; and

(*d*) That if the principal, being a member of one society, is sued jointly with the assistant or locum tenent or subordinate medical officer, who is a member of the other society, each society will defend its own member and the two will collaborate in the conduct of the case.

It was proposed by Dr. J. STEVENS, on behalf of Edinburgh:

That the Council be requested to take all necessary steps as soon as possible to deal with the situation that has arisen as a result of the findings of the jury in the Harnett *v.* Fisher case, with the view of protecting the interests of the medical profession.

Dr. ROXBURGH, supporting the motion, said that it was scandalous that the profession should be subjected to legal proceedings for issuing bona-fide certificates.

The motion was referred to Council.

*Motor Licences.*

Dr. S. MORTON MACKENZIE proposed on behalf of Reigate:

That the Council be instructed to use all possible pressure to obtain such amendments to the Motor Licence Regulations

as will allow medical practitioners to transfer temporarily their licence to a second car if the first be out of use.

He said that doctors were worse off than ordinary car users who could often postpone their journey if the car was out of order. Hiring was uneconomical and most doctors had to keep two cars, with a second licence at an increased rate, although the two cars were never both in use. Motor insurance companies met the doctor's difficulty by insuring the second car at a reduced cost and rapidly transferring the first insurance to the second car without any expense when the first was laid up.

Mr. E. B. TURNER said that the policy of the Association was to get back the petrol tax. From what the Chancellor of the Exchequer had said recently it appeared that this might soon be obtained, in which case the injustice would cease to exist. Practitioners could do far more by attacking their respective M.P.'s on the subject than the Central Council could do.

Dr. L. G. GLOVER (Hampstead) remarked that it did not seem well known that it was possible to take out a quarterly licence for the second car, and if at the end of the quarter the car had never been used the licence was renewed free of charge.

Dr. BONE said that the substitution of the petrol tax for the car tax was the Association's policy, and it would be best to keep to that. Nor did he care to go as a mendicant to the Government asking for special concessions which would be thrown in the profession's teeth when they went at some other time to ask for their rights. Other professions required the use of a second car and all should be treated alike.

The motion was rejected.

*Medical Insurance.*

It was proposed by Hastings:

That the Council be instructed to consider the advisability of instituting a scheme of insurance for members of the B.M.A. on similar lines to that afforded to members of the British Dental Association by the Dentists Provident Society.

Dr. C. L. MORGAN outlined the scheme in force under the Dentists' Provident Society.

Dr. BONE said he did not think there was any demand for such provision as there were already many excellent schemes provided for medical men.

Mr. BISHOP HARMAN pointed out that in 20 years less than 800 dentists had joined their Association, and its reserve fund was only £2000, and that the professional risk of dentists was the smallest of any group of workers, while that of doctors was one of the greatest. General insurance companies could meet it by diluting doctors with other professions. He did not think any scheme of insurance would be practicable.

The motion was rejected.

*Use of Pituitrin by Midwives.*

Dr. J. HUDSON proposed for the North of England branch:

That midwives should not be allowed to use pituitrin under any circumstances,

saying that it was a potent drug which should not be in the hands of women with six months' training.

Dr. LYSTER said he wished the Representative Body would persist in sending up such recommendations to the Midwives Board as in time they would produce their effect. The attitude of the Board was that the midwife was taught and accustomed to use certain drugs in her training, and therefore she should be able to use them in her practice. She had to enter them in her register, so that the extent to which she used them could be ascertained. This would be satisfactory if there were any organised and systematic inspection of midwives, but, in fact, it was most imperfect and perfunctory, and afforded little or no protection to the public.

Dr. BONE said that Dr. Hudson was preaching to the converted. The Council had taken vigorous action. The Minister of Health had expressed the opinion that pituitrin should only be used by a midwife under the direction of a doctor, but the Midwives Board took up the attitude that it did not interfere with its midwives beyond demanding a record of drugs used. The only way to produce an effect was to get information as to how extensively pituitrin was employed and find some case or cases where danger or damage had resulted from its use; pious resolutions were useless.

Dr. P. HAMILL moved an amendment:

That the words "pituitary preparations" be substituted for the word "pituitrin."

He pointed out that pituitrin was a registered trade name, and if the motion were passed in the proposed form there would be nothing to prevent the use of infundin or any other form of pituitary extract. This amendment was carried. The same speaker suggested that it was undesirable that there should be any suggestion that the profession put anything in the way of the use of substances that might save life, and in remote districts it might take a long time to get a doctor. His division therefore proposed:

That the words "except in case of grave emergency and after medical assistance has been summoned" be substituted for the words "under any circumstances."

This amendment was lost, Dr. BONE saying that he thought this qualification would be impracticable.

The motion was carried.

*Treatment of Rheumatic Children.*

Dr. E. A. STARLING proposed, and Dr. E. R. FOTHERGILL seconded:

That this meeting requests the Council generally to consider and report upon the present position and probable future development of organised schemes for "the treatment of physically crippled children" (infancy up to 16 years of age), and of "children suffering from actual or potential rheumatism and/or heart disease," and in particular to consider the following suggested governing principles: (*a*) the selection of patients should be mainly through the various branches of the public health service; (*b*) the clinical treatment should, wherever possible, be by means of private practitioners and voluntary hospitals.

Dr. Starling said that many schemes had been put forward and discussed. Many branches of clinical work had been handed over to whole-time public health officers, and it was most important that their number should not be added to. The treatment of rheumatic children was very important, and it would be wise for the Association to consider the matter and formulate their attitude.

Dr. ROXBURGH said that if any part of clinical work and experience were taken away from the general practitioner a contribution was made to his inefficiency.

*National Health Insurance.*

Dr. H. G. DAIN proposed the adoption of the annual report under "National Health Insurance." He said that the Royal Commission had reported and the Government had produced a Bill that made medical benefit a first charge on the funds. The Committee had been very concerned by the tremendous increase in work that was called for from the National Health Insurance doctor, and it would not be long before the money would be insufficient to pay for the services asked. It was not likely that the other recommendations would be actively considered this year, and the Committee did not think it wise to raise any question of fees under present circumstances.

It was proposed by Marylebone Division (Dr. W. GRIFFITH):

That on account of the widespread disabilities caused by diseases of the nose, throat, and ear, the Council be instructed to point out to the approved societies the importance of adding the payment of the whole or part of the costs of oto-rhinological and laryngological treatment as an additional benefit.

He said that his division was anxious that the position of the insured patient should not be worse in any way than that of the private patient and that additional benefits should be available at the first possible moment.

Dr. CHRISTINE MURRELL (Kensington) supported the motion, saying that the eye made a greater sentimental appeal to the public than the ear, and it was the duty of the profession to point out that disabilities of hearing were as great or greater than those of sight.

The early treatment of otitis media had recently become relatively hopeful, and it was most important that advice should be obtained as soon as there were signs of ear trouble.

Dr. PETER MACDONALD (York) said that the value of the motion depended on the extent to which it would help to create a public opinion. Parents and school-teachers, especially house-masters, needed education as to the importance and urgency of "running ears." He was not, however, certain that Marylebone's method was the best and suggested referring the matter to Council.

Dr. DAIN said he was in full sympathy with the necessity for an educational campaign, but thought that what had been said had done all that could be done. No approved society would be in a position to consider any additional benefits for five years.

It was agreed to pass to the next business.

Dr. DAIN then proposed:

That the Representative Body regards as serious the situation which arises in consequence of the negative replies of the Ministry of Health in connexion with the methods and machinery for dealing with complaints against insurance practitioners; and pledges itself to support proposals (*a*) to secure equal justice for practitioners as for insured persons and approved societies, (*b*) improved methods for dealing with complaints of minor importance, and (*c*) resistance to any claims of the Ministry of Health or of insurance committees to judge as to the propriety of the treatment adopted by a practitioner in attending his patient or the relative degree of care and skill shown by a practitioner in such attendance as compared with that of other registered medical practitioners.

He said that the motion arose from the strong feeling of the Insurance Acts Committee that the present arrangements were unsatisfactory and needed considerable modification. It was impossible for anyone to decide on read evidence alone that a doctor had not done all that he should have done and still more to impose a penalty. The Ministry had been pressed most strongly either not to deal with such cases or else, if they did, to allow the doctor an appeal. On account of a lack of sympathetic assurance from the Ministry he asked the Representative Body to carry the motion in support of their colleagues engaged on National Health Insurance work.

Dr. C. H. HALL (West Hertfordshire) seconded the motion and read a letter from a K.C. who had resigned his position as vice-chairman of the local medical service subcommittee because of his indignation at the attitude of the Ministry, which he described as "contrary to the ideas of justice in which I have been trained." The letter went on to describe the case in question, which was that of a busy doctor who dictated his prescriptions over the telephone to his qualified dispenser, who signed them. On being brought before the committee the doctor admitted that he had overlooked the regulations and undertook that it should not occur again and expressed his regret. There was no evidence that anyone had been injured by his practice in any way. The committee unanimously agreed that a caution would meet the case. The Ministry officials interviewed the doctor and then met a deputation from the local committee. They stated that the doctor had broken his contract and must be fined for the breach whether there had been damage or not; they even intimated that there ought to be a scale of deductions for different breaches of the terms of service. It was contrary to all legal training and teaching that persons who had not been present at the hearing should decide that a penalty should be inflicted when those who were present had found otherwise. The writer of the letter concluded that so long as this system prevailed he felt he would be out of place in assisting in its administration.

Mr. E. B. TURNER proposed to strengthen the resolution by inserting the words "to organise a most strenuous" before the word "resistance," and this was carried. He said it was a tremendous slight on the profession as a whole and absolutely preposterous for any insurance committee as at present constituted to say whether a doctor's treatment was right or wrong.

The amended motion was carried unanimously.

*State Medical Service.*

It was proposed by Dr. MUIR SMITH, on behalf of Eastbourne:

That the Representative Body is of opinion that no scheme of a State national medical service can be acceptable to the profession which fails, in principle, to recognise (1) the equitable claim of the practitioners' undertaking to a similar measure of that protection which the law affords to unindentured contracts for service, and (2) the entitlement of the practitioner to the right of appeal to a court of civil jurisdiction on questions of administrative procedure.

Dr. DAIN said that the evils feared by Eastbourne were entirely imaginary, and the motion was rejected.

In the course of the afternoon it was announced that the following eight members of Council had been elected: Drs. J. W. Bone, H. G. Dain, Mr. W. McAdam Eccles, Drs. E. R. Fothergill, R. Langdon-Down, Sir Richard Luce, and Drs. J. A. Macdonald and G. W. Miller.

TUESDAY, JULY 20TH.

*Public Health Appointments.*

The Chairman of the Public Health Committee proposed on behalf of Council:

That the Representative Body is of opinion that it is inadvisable and improper that whole-time medical officers engaged in public health work should be required, without suitable extra remuneration, to undertake medico-legal or other duties not directly concerned with their duties as officials of local health authorities;

and also:

That with regard to salaries (under the scale of Minimum Commencing Salaries for Whole-time Public Health Appointments) for non-resident public health appointments, subsistence allowances be regarded in the same manner as travelling expenses—i.e., as being included in the reasonable expenses properly incurred in the course of the duties of the appointment—which cannot be regarded as being part of the salary.

Both these motions were carried.

Dr. E. SOLLY proposed on behalf of Harrogate:

That the remuneration of the medical superintendent (including the responsible medical officer) of a Poor-law hospital should be based not on the number of assistants which the board of guardians provides to help him in his work, but on the number of beds in the hospital and on the nature and extent of his responsibilities.

The motion was supported by Dr. D'EWART and Dr. MASTERMAN, and was carried.

In proposing the adoption of the annual report under "Public Health and Poor Law," the Chairman of the Committee pointed out that the Association had obtained the scale salary in 138 out of 173 public health appointments considered during the year.

*Public Education in Health.*

It was moved by Brighton (Dr. E. R. FOTHERGILL):

That the Council be instructed to consider and report on how branches and divisions of the Association, as voluntary bodies, could make their contribution towards public education in health as advocated by Sir George Newman in his memorandum (issued in January, 1926) addressed to the Minister of Health.

Dr. Fothergill said that the work of the Association in breaking down individualism and exclusiveness and safeguarding the proper interests and the honour and rights of the profession had won for it the respect and confidence of governments and the people they governed. This achievement opened the door towards its second ideal—viz., preventive medicine. Much had been done centrally, and it was now important to see if more could not be done locally.

The motion was passed.

*Advertisements Requiring Membership of a Medical Organisation.*

Dr. LANGDON-DOWN moved:

That it be an instruction to the Council to refuse advertisements of appointments which make it a condition either that the applicant must already be, or if successful in obtaining the appointment must become, a member of a professional organisation, society, or union, other than a society for individual medical defence.

He said that these advertisements admitted the interference of lay bodies on a matter of purely private and individual concern, connected only remotely with

medicine and rather with politics. It had been legally stated that it was ultra vires to attach any such condition. Dr. J. A. MACDONALD, seconding, said that it was not desirable to put a restriction on any man. Dr. E. W. MASTERMAN said that recently certain boards of guardians had tried to force all their employees, including doctors and nurses, into a trades-union. After some trouble the compromise referred to in the motion had been reached, and it would be most undesirable to disturb it. Sir ROBERT BOLAM said that the matter had been fully discussed by the Council; they did not wish and had never made any attempt to compel men to enter their own or any organisation, yet it would be the height of folly to refuse what was thus freely offered from an outside body, so long as it did not conflict with their policy or militate against professional integrity. It had nothing to do with a trades-union.

The motion was rejected by a large majority.

Sir EWEN MACLEAN, proposing the adoption of the annual report under "Causation of Puerperal Morbidity and Mortality," mentioned the interim report and questionnaire which had been sent to the divisions, over 100 of which had returned careful answers.

*Poor-law Reform.*

Dr. BRACKENBURY proposed the adoption of the report under "Poor-law Reform" which had been discussed earlier, and announced that a letter had been received from the Minister of Health stating that steps were being taken to protect the interests of medical officers at present holding appointments under boards of guardians. A motion by St. Helens and Warrington dealing with this point was therefore withdrawn.

*The Services.*

Sir RICHARD LUCE, Chairman of the Naval and Military Committee, proposed the adoption of the annual report under this title, and also:

That the Association expresses its satisfaction with the new rates of pay and conditions of service for the R.A.M.C., and is prepared to assist the War Office in every way in its power to obtain an adequate number of candidates for entry into the Corps.

He remarked that it had been promised that time put in as house physician or house surgeon should be allowed to count towards seniority, so that it would no longer be necessary for R.A.M.C. candidates to decide on their career immediately on qualification.

Dr. GOODBODY drew attention to the fact that in the Civil Constabulary civilian medical practitioners had been awarded higher rates of pay than Territorial officers. Sir RICHARD LUCE replied that a letter had been received giving assurance that such an anomaly should not occur again if a similar force were called into being. Dr. GOODBODY said that, as such satisfactory terms had been reached, he would merely move formally a motion by Marylebone:

That the Representative Body, anxious to express its appreciation of the work of the Naval and Military Committee, assures the Council of its support in any further action which it may deem necessary to secure a just recognition of the reasonable claims of officers serving with the forces.

This was passed.

Sir ROBERT BOLAM expressed appreciation of the amount of time, patience, and strenuous work that Sir Richard Luce had given in helping to arrive at these very satisfactory results.

*Medical Charities.*

Dr. J. F. WALKER, proposing the adoption of the annual report under "Medical Benevolence," made a strenuous appeal for a wide support of the Charities Fund, and stressed the very great importance of the work of divisions and branches and of panel committees. The honour of the profession and the prestige of the Association were at stake. There was no other profession that did not look after its distressed brethren, and there was no doubt whatever that many medical men were being broken in body and spirit through undeserved misfortune—some had been advised to apply for the old age pension—and that there was real distress among them and their dependents which it was the duty of the profession to relieve. A subscription of £1 a year from every doctor would be sufficient.

*Overseas Branches.*

Sir JENNER VERRALL, proposing the adoption of the annual report under "Oversea Branches," referred to the negotiations with the Colonial Office about conditions of service in East Africa and Kenya, and said that the Office now realised that the Association was anxious to help and not to obstruct them, and to ensure that men entering the Colonial Service should know exactly to what they had to look forward.

In addition to the further reports on Scotland, Ireland, and Wales, and formal business, a resolution of condolence was sent to Dr. E. M. Cowell, who had come to Nottingham to represent Croydon, but had spent the week in hospital.

Dr. T. W. H. Garstang was elected an additional vice-president, in recognition of his long and faithful service to the Association.

ANNUAL GENERAL MEETING.

The annual general meeting of the Association was held in the Mechanics' Hall, Nottingham, at 2 P.M., on Tuesday, July 20th, when the outgoing President, Dr. F. G. Thomson, inducted Mr. R. G. Hogarth as President for the ensuing year. The meeting received the report of the Representative Body that Prof. Sir Robert Philip had been elected President for the year 1927–28. Sir Robert Philip welcomed the Association to Edinburgh for its annual meeting in 1927, referring to the Lister centenary celebrations with which the visit would coincide. Sir Robert Bolam, in proposing a vote of thanks to the retiring President, said how greatly the Association regretted the illness which had deprived them of his presence on the occasion of the Bath meeting. The meeting adjourned until 8 P.M. at the Albert Hall, where the Overseas Delegates were presented to the President by the honorary local secretary, and the gold medal of the Association was bestowed, amidst applause, on Sir Humphry Davy Rolleston, in recognition of his distinguished services to science, the profession, and the Association. The first Sir Charles Hastings clinical prize was presented to Dr. Norman Porritt, of Llandudno. Mr. Hogarth then delivered the presidential address which appeared in full in our columns last week.

ANNUAL DINNER.

The annual dinner, held on the evening of Thursday, July 22nd, at the Palais de Danse, was very largely attended. Mr. R. G. Hogarth, who presided, was supported by the Duke of Portland (Lord-Lieutenant) with the Duchess, the Mayor and Mayoress of Nottingham, the Hon. Lady Birkin, Mr. J. Boot, and Mr. F. Acton. In proposing "The British Medical Association" the Duke of Portland paid a tribute to the illuminating presidential address of Mr. Hogarth, whom he described as one of the most eminent, most skilful, and most useful citizens of Nottingham. He welcomed the Association to Nottingham with the opportunity it afforded to practitioners of learning the latest advances in medicine and handing them on to their patients, he voiced his appreciation of the value of a corporate body in medicine capable of expressing medical opinion to the public and to Parliament, and he announced the opening of a local branch of the British Empire Cancer Campaign, of whose committee he was president. Sir Robert Bolam expressed his pride and pleasure at responding for the Association. He wished success to the soon-to-be-inaugurated University of Nottingham and reported a year of smooth passage in the affairs of the Association, thanks to the unceasing diligence and toil of its voluntary workers. He announced that future meetings of the Association were to be held at Edinburgh (1927), Cardiff (1928), Manchester (1929), and Winnipeg (1930)—in the latter case with a view of binding the ties of Empire. He welcomed the effort to make this country accessible for post-graduate work

in medicine. Sir Berkeley Moynihan, who eloquently proposed "The City of Nottingham," enumerated some of the medical names for which the nation owed Nottingham a debt of gratitude, and rejoiced in the municipal devotion to art. The passion for beauty, he said, had always afforded a refuge from professional lassitude, and those who were developing the local University were raising up memorials to themselves in the grateful hearts of the people. Alderman Foulds responded for the city, describing himself frankly as one who had never been a friend of doctors. Dr. Brackenbury, as Chairman of the Representative Body, proposed "Our Guests," describing himself as "proud of our associates as well as of our Association." Response was made by Mr. L. E. Barnett, F.R.C.S., President-elect of the Australasian Congress, 1927, and by His Honour Judge R. W. Turner. Sir Humphry Rolleston proposed the President in well-turned phrases, lauding the sportsman's training for the great game of life, and in reply Mr. Hogarth thanked all who had grudged neither time nor trouble to make the meeting a success, mentioning especially the name of the honorary local general secretary, Mr. A. M. Webber.

### EXCURSIONS AND SOCIAL AMENITIES.

The Representative Body were entertained for the night of Saturday, July 17th, by the Corporation of Buxton. Over 300 guests took dinner in the Palace Hotel under the presidency of the Mayor of Buxton, Alderman T. H. Cooper, who proposed the health of the Association and urged the importance and usefulness of British spas. The Deputy-Mayor, Dr. C. W. Buckley, replying to the toast of "The Corporation," proposed by Mr. Hogarth, spoke of the great amount of damage done by rheumatism and the necessity for further investigation. On Sunday the party were conducted over the spa and then conveyed in motor chars-à-banc over the Cat and Fiddle pass and via Chatsworth Park and Haddon Hall to Rowsley, where they rejoined the special train for Nottingham. In addition to the President's reception on Tuesday evening, the Mayor and Mayoress received members of the Association at the Castle on Wednesday evening, and the local division held a reception on Friday evening. Many excursions to beautiful and interesting places were arranged, and opportunity was provided for inspecting the local factories by invitation of the firms.

### EXHIBITION OF INSTRUMENTS, DRUGS, FOODS, AND APPLIANCES.

The usual exhibition was held from Monday, July 19th, to Friday, July 23rd, in the Victoria Halls, where the space and lighting were adequate for the display of material, both novel and well-tried, for the furtherance of medical practice in many directions. There were more than 80 stands of which an account will be given in a later issue.

## SECTION OF MEDICINE.

### WEDNESDAY, JULY 21ST.

The first session of this Section was devoted to a discussion on

### SOME RECENT DEVELOPMENTS IN OUR KNOWLEDGE OF THE BILIARY TRACT.

Dr. FRANK HARWOOD JACOB, the President, said that it was to be the privilege of the section to hear those who had done notable original work on the biliary tract discussing their own subject. He asked Prof. E. A. GRAHAM (St. Louis, U.S.A.), who had initiated cholecystography, to deliver his address.

Prof. GRAHAM said that disorders of the gall-bladder affected a large proportion of adult humanity and probably constituted the most frequent organic cause of dyspeptic symptoms. Yet the known normal functions of this viscus were merely the regulation of pressure in the biliary system and the concentration of bile by the absorption of water. Other functions had been suggested, but had remained unproven. Sweet had shown that in some animals which do not possess gall-bladders and in animals in which the gall-bladder had been removed there were a large number of saccules projecting from the walls of the intra-hepatic bile-ducts. These might compensate for the loss of the organ. Apparently, then, the serious consequences of cholecystic disease were due to something else besides the disturbance of the functions of the gall-bladder.

Inflammatory changes in the liver were, he said, a constant accompaniment of cholecystitis. By removing a small piece of the liver during operations on the gall-bladder the speaker had been able to show that a pericholangitis was present in every case. Other workers had corroborated his findings. Microscopic examination of gall-bladders removed at operation showed that in the earlier cases inflammatory change was more often found at the periphery than in the mucosa of the organ. The older theory that bacteria, especially the typhoid bacillus, were brought to the liver by way of the portal vein, secreted in the bile, and thence carried to the gall-bladder, presented numerous difficulties. It was not easy to infect the gall-bladder by introducing bacteria into the lumen unless at the same time the cystic duct or artery was tied or the mucosa injured. Moreover, both Osler and Rolleston had shown that cholecystitis was rare in the acute stage of typhoid fever when bacilli might be supposed to be numerous in the bile. Infection via the cystic artery had been suggested, but the lymphatic path was probably far more important. There was a very extensive anastomosis between the lymphatics of the liver and the gall-bladder. The results of experiments supported the hypothesis of lymphatic infection. Further, recent work on paratyphoid showed that cholecystitis did not occur in this condition unless there were actual inflammatory lesions in the liver. This finding seemed to corroborate the speaker's view of the spreading of a pre-existing inflammation of the liver to the wall of the gall-bladder through the lymphatic vessels. Inflammatory lesions of the portal system might easily set up a hepatitis which in turn was followed by cholecystitis. Clinicians had long been familiar with this sequel to such conditions as appendicitis, peptic ulcer, and typhoid fever. The reverse was also true, for hepatitis followed experimentally produced cholecystitis. A vicious circle could thus be established, each organ reinfecting the other. Kodama's work on lymphatics showed that a duodenal ulcer might directly infect the gall-bladder. In these cases the accompanying hepatitis would be secondary.

Prof. Graham then described the investigations which led to his method of rendering the gall-bladder opaque to X rays by means of injections of tetra-bromophenolphthalein, tetra-iodophenolphthalein, and its isomer phenoltetra-iodophthalein. These substances were excreted via the liver into the bile. They passed into the gall-bladder, where they were concentrated by the absorption of water. Hence the densest shadows were found in normal subjects. There would be no shadow, or only a faint one, if the liver were unable to excrete the substance normally, if the cystic duct were occluded, or if the gall-bladder were unable to concentrate its contents because of a diseased wall. Cholecystography was really a means of studying the function of the gall-bladder rather than an indication of the exact pathological lesions present. But since from the days of Galen *functio laesa* had been recognised as one of the cardinal signs of inflammation, this condition, even in its early stages, could be detected by the method.

The points relied on, he said, in making a diagnosis of cholecystic disease were: (1) Failure to obtain a shadow when the technique had been properly carried out. (2) Filling defects. Soft calculi were frequently seen as "negative" shadows or filling defects. Many small stones produced a characteristic mottled appearance. (3) Irregularities of contour, denoting adhesions, diverticula, &c. (4) Variations from the normal in density of shadow, and in time of appearance and disappearance of shadow. These last were more difficult to interpret. Out of 1144 cases examined by

cholecystography 128 had their gall-bladder removed at operation. The pathological examination confirmed the X ray diagnosis in 124. Toxic reactions occurred in a certain number of cases after intravenous injection and more after oral administration of the drug, but they were seldom severe. No death had been recorded following the injections.

Besides its clinical application cholecystography had been made use of in the study of the physiology of the gall-bladder. Prof. Graham's own findings and those of his co-workers threw considerable doubt on Meltzer's hypothesis of a reciprocal innervation of the sphincter of Oddi. The gall-bladder contained but little muscle. In spite of prolonged observation the speaker had never seen peristaltic contractions. The viscus emptied itself by a gradual washing out following the inflow of fresh bile and by elastic recoil. Increased abdominal pressure also played a part. The muscular coat of the duodenum was an important factor in regulating the outflow of bile. The common duct passed obliquely through the duodenal wall for 2 or 3 cm., so that peristaltic contractions had a milking action on it. Substances supposed to have a specific effect in emptying the gall-bladder probably did so by stimulating duodenal peristalsis.

The speaker illustrated his points by a series of remarkable X ray pictures.

*Diagnostic Considerations.*

Dr. A. F. HURST said that gall-stones were found post mortem in 10 per cent. of cases after the age of 20. Their formation was always preceded by cholecystitis, but many people who had attacks of cholecystitis did not develop gall-stones. A large part of the population suffered at one time or another from the disease. Therefore cholecystitis was not only, as Prof. Graham had said, the commonest organic, but the commonest of all abdominal diseases. Text-books gave much space to the rarer and more serious lesions of the gall-bladder such as empyema or gangrene, but little to the more important because much commoner milder infective disturbances. The latter in the early stages were amenable to efficient medical treatment, and the formation of gall-stones could be prevented. It was important that practitioners should realise that cases of flatulent dyspepsia might really be cholecystitis. Sir Berkeley Moynihan had described the symptoms with great accuracy. The chief were tenderness in the region of the gall-bladder, spots of referred tenderness, and slight rigidity of the right rectus muscle. For accurate diagnosis, said Dr. Hurst, the patient should be sent to a team (a diagnostic team of this type should exist in every town) consisting of a radiologist, biochemist, bacteriologist, and clinician. A complete abdominal examination was necessary because cholecystitis was often associated with appendicitis, peptic ulcer, &c. Hyper- or achlor-hydria existed in 50 per cent. of the cases. The speaker considered that the information to be derived from the passage of a duodenal tube was as important as that obtained from cholecystography. Normal cholecystograms were sometimes found in patients in whom the duodenal tube gave evidence of disease. In cholecystitis the bile specimens withdrawn contained pus and epithelial cells, organisms (generally *B. coli*), and cholesterol crystals.

With regard to treatment, Dr. Hurst maintained that cholecystitis was an infective disease and the infection must be overcome. The biliary tracts could be sterilised by hexamine. Hexamine was not, as a rule, effective in alkaline secretions, but bile was an exception probably owing to lowered surface tension. If sufficient alkali was given with hexamine it did not act as a urinary irritant and could be administered in large doses. He frequently gave 100 gr. three times a day. This quantity acted as a powerful biliary antiseptic. Achlorhydria was a predisposing cause of biliary infection,and to patients showing this symptom he was in the habit of giving a drachm of dilute hydrochloric acid before meals. Hyperchlorhydria could be controlled by olive oil, which had the additional advantage, as Prof. Graham had shown, of causing a flow of bile into the duodenum and thus preventing biliary stasis.

Dr. F. A. KNOTT drew attention to some important points in connexion with the use of the Einhorn tube. He analysed a series of 71 cases of gall-bladder disease in which examinations had been made of bile from the duodenum. Out of 25 cases of gall-stones three gave normal reactions. In the others the bile contained crystals and bacilli. In 46 cases without calculi the bile gave normal reactions in 26 per cent. 40 per cent. of cases showed achlorhydria. He thought that the action of urotropine might be due to the acid produced by the organisms. *B. coli* might ring themselves round with acid and formaldehyde might thus be liberated in their neighbourhood. Lowered surface tension also was inimical to the growth of bacteria.

Prof. D. P. D. WILKIE expressed his satisfaction at finding cholecystography so widely practised. It was an extremely valuable aid to diagnosis, and should become a standard method. His experience was in conformity with Prof. Graham's statement that the intravenous method gave the most accurate results. Very great care in technique was necessary to prevent reactions. He found that males were more immune from reaction than females, perhaps because the male was more immune to cholecystitis than the female. Dr. Wilkie spoke of the value of physiological research into the functions of the gall-bladder and remarked that the exalted egoism of the sphincter of Oddi had been rudely shaken by Prof. Graham and his co-workers. Dr. Hurst and Dr. Knott had stated that primary infection of the gall-bladder was the origin of all stones, but a single cholesterin stone might form aseptically. He had grown streptococci from the wall of the gall-bladder in cases where the bile itself was sterile. From this it followed that the presence of disease could not always be proved by the Einhorn tube, nor could it necessarily be cured by drugs excreted into the bile.

Mr. C. F. W. ILLINGWORTH gave his experience of cholecystography. He had followed Prof. Graham's technique and preferred intravenous administration of the drug. In 111 cases which came to operation the X ray diagnosis was confirmed in all but 12. In his hands the method had been of no value in obstructive jaundice, but was of great assistance in the differential diagnosis of palpable abdominal tumours. His paper was illustrated by beautiful X ray plates.

*Alterations in Biliary Secretion under Different Conditions.*

Dr. J. W. MCNEE dealt with the alterations occurring in the biliary secretion under different conditions. Normally the chief constituents were water, bilirubin, bile-acids and salts, and cholesterol. In disease additional substances were found, the most important being calcium salts. Bile as secreted differed from that found in the gall-bladder, principally owing to the absorption of water by this viscus. In animals gall-bladder bile was ten times as concentrated as that found in the biliary passages. Only two functions of the gall-bladder were known, but it must have others besides. It was ridiculous to regard it as a rudimentary organ just because surgeons could remove it. Speaking of changes in the bile-pigment the speaker said that bilirubin was derived from hæmoglobin from which the iron-containing particle had been split off. Therefore it might seem that the amount of bilirubin must depend on the amount of hæmoglobin broken up—i.e., on blood destruction. In favour of this was the fact that in acholuric jaundice pigment stones were frequent. On the other hand, Whipple and Hooper found no increase in bile excretion after large injections of hæmoglobin. The effect of increased blood destruction appeared very variable. Diet, however, might considerably modify the pigment excretion. In dogs on a mixed diet there was little variation, but if sugar or carbohydrate were given the pigment excretion was considerably increased and remained so for some hours. Meat, on the contrary, led to a diminution in excretion. It was unsatisfactory that no accurate method existed of determining bile-

acids and salts either in plasma or in bile. In spite of much hard work the speaker had been able to find no way of doing so. Obviously variations in these substances must alter the physics of bile and this might furnish the key to many diseases. Only one fact about them was known—bile-acids were one of the first substances to cease to be excreted in obstructive jaundice.

Cholesterol was then considered. According to Naunyn the cholesterol in the bile was secreted by the wall of the gall-bladder, but every other observer was against this view. Cholesterol in plasma and bile was derived from the cholesterol esters of the food. Its metabolism was extremely conservative. It was de-esterised in the liver, excreted in the bile into the intestine, where it was again esterised and reabsorbed. This doctrine was founded on a considerable series of experiments, but was in contradiction to the French view. According to the French the suprarenal cortex and the corpus luteum of the ovary were the producers of cholesterol in the blood. In point of fact, however, these organs only acted as depôts. Anything which raised the cholesterol content of the plasma raised the cholesterol in these situations or vice versa.

With regard to diagnosis the mere presence of organisms in the bile was insufficient evidence for a diagnosis of cholecystitis. Cholecystitis was an inflammation of the wall of the gall-bladder. Graham's work on the lymphatic path and on the connexion between cholecystitis and hepatitis was extremely important. In inflammatory conditions dead cells, cholesterol crystals, inflammatory exudate, and especially calcium salts were found in the bile. Attention to diet was an important means of treatment, but it was useless to think that by withholding cholesterol the formation of stones could be prevented. Its metabolism, as already explained, was too conservative to enable us to cut the substance out by dietetic measures. Since sugar increased the excretion of bile-pigment and since glycogen protected the liver cells from a great variety of poisons, Dr. McNee recommended the use of sugar in treatment.

The speaker asked Prof. Graham whether "bad arms" had followed intravenous injections of his drug.

Dr. T. IZOD BENNETT said that the practitioner encountered many exceptions to the text-book pictures of gall-bladder disease. The range of symptoms was very wide; tenderness to pressure below the right costal margin, when the patient was in the upright position, was the most constant sign. Cholecystography had opened up a new phase in diagnosis. The results in his experience were most satisfactory. He employed the oral method exclusively. It avoided "bad arms" due to thrombophlebitis in the vein. In some instances variations in gastric and duodenal secretions had caused trouble in absorption, but if cholecystography was to come into general use the substance must be easily given without risk of local trouble. The method enabled us to watch the progress of a case under medical treatment. Dr. Graham had done more than any surgeon to save patients from needless operation. In treatment the speaker insisted on the necessity for water in abundance. Egg-yolk also promoted biliary drainage. The drugs he used were magnesium sulphate, bile-salts, and hexamine.

Dr. J. H. ANDERSON analysed a series of 50 cases and showed radiograms. At first he had used intravenous injections, but he had given them up in favour of the oral method. He had had no alarming after-effects. In every case save one the X ray diagnosis had been confirmed at operation.

Sir BERKELEY MOYNIHAN said that in a long series of cases diagnosis by cholecystography had proved accurate in 92 per cent. Its value to the clinician was great, but greater still was the help it gave in determining physiological data. Infections of the gall-bladder began outside, as a rule, and reached the inner surface later. All gall-bladders showing adhesions should be removed. Sir Berkeley Moynihan differed somewhat from Dr. Graham in his opinion of the value of estimating cholesterol in the blood. In the early stages of cholecystitis he had found a cholesterinæmia in a high proportion of cases. The cholesterol in the bile was also increased, leading to the "strawberry" gall-bladder.

Sir HUMPHRY ROLLESTON said that he could not agree with Dr. Hurst that we could hope with improved early diagnosis and treatment to do without surgeons. He had long used hexamine in gall-bladder disease. It gave relief, but he could not promise cure. Early diagnosis was difficult because very considerable lesions often occurred without corresponding symptoms.

Prof. GRAHAM, in reply, said that this morning's symposium had been one of the most interesting to which he had listened. In answer to the question about "bad arms" he had had occasional cases of thrombo-phlebitis, but with improvement in the drugs used he hoped to do away altogether with this complication. He was now using a new substance, and so far had had no local trouble with it.

## SECTION OF MEDICAL SOCIOLOGY.

FRIDAY, JULY 23RD.

### OCCUPATIONAL FATIGUE AND MONOTONY.

Dr. C. J. BOND, the President, in his opening address at the morning session, said that, owing to the increasing stress of modern industrial life, the questions of the effect of fatigue and monotonous work were becoming of increasing importance, so that it was most desirable to enlist the interest of the whole medical profession in the advances recently made in this field of industrial physiology and psychology. The meeting of this section, being open to the portion of the lay public interested in industrial health and welfare work, presented an excellent opportunity of hearing the views of representatives of the Industrial Fatigue Research Board and the National Institute of Industrial Psychology, of medical officers of large industrial undertakings, of employers of labour, of welfare workers, and of the workers themselves. Two principles must be kept in mind, if they were to build on a sound foundation: (1) Every normal human being strives to obtain some sense of satisfaction from energy expended and work done, and failing such acquirement, effort becomes reduced in volume or is diverted into other channels. It was just as important to raise the standard of life in the factory and workshop as in the home. If workers derived real satisfaction from their daily work there would be less unrest in industry. (2) The second principle was concerned with finding the right man for the job—vocational selection. The industrial problem was an evolutionary one, and the worker must be fitted by nature or by training for his particular occupation and become adapted to his industrial environment.

Mr. A. HUDSON DAVIES, of the National Institute of Industrial Psychology, opened a discussion on the

*Monotony Factor.*

He gave the University boat race as an illustration of monotonous work. The effect of monotony was felt in the training, but not in the race, owing to the incentive. A muscle exhausted by repeated contractions would still contract under electrical stimulation. Industry was becoming specialised and repetitive work was the result—the same effort repeated every few seconds with uniformity and no surprises for the worker and no variety so as not to waste a man's special skill. The effect varied with the worker. There was a perpetual holding by the worker of himself in check, but no freedom for reveries. Workers of good education and intellect employed at, say, a monotonous counting job, might feel resentment that their full powers were not being called out, and gradually become conscious of a hampering of intelligence and of inertia. Others might develop curious mental symptoms, indulge in day-dreams with a feeling of guiltiness, and even fancy they were being watched or going mad. Sometimes the irritability or resentment of the worker found relief in spoiling material. It was most important to counter all the

possible effect of monotonous work by attractive environment in the factory and by outside recreation.

Miss MAY SMITH (Industrial Fatigue Research Board) said the complaints of monotony generally came from highly educated observers, who judged how the work would affect themselves. Observers must learn to see the work as it really appeared to the worker. They need not concern themselves about people who desired monotonous work, but only with those who were forced or drifted into it. Among the latter some of the reactions to monotonous work were boredom, excuses for escape from work, resentment of correction, tiredness, complaints of pain, nervous dyspepsia, lessened resistance to colds or influenza, and loss of interest leading to nervous breakdowns. Some got relief from day-dreams; others had unpleasant day-dreams and became psycho-neurotics. Others made bitter complaints against the monotony, while some laughed at monotony, and she had known such an event as the preparations for a fancy dress dance temporarily relieve the situation.

Major T. KNOWLES (supervisor, Boots' welfare centre) made a spirited defence of repetitive work and claimed that the girls employed on it were both healthy and happy. The work was easy and not nerve-wearing, and the workers got their opportunities for recreation and self-development in their leisure. Science had given them machines, and machines necessitated repetitive work with much less physical effort on the part of the operative. He would like to encourage the love of machines. Those who condemned repetitive work had nothing to offer in its place. The girls engaged in repetitive work to a large extent made up the evening classes in commercial and domestic subjects, and resented any effort to have their work changed. The percentage of sickness among them was about half that of the other workers. They played their part in social, educational, and recreational developments. But he would only plead "not guilty" on the monotony question, for the employer *if* he had taken every precaution, had observed time-shifts and studied movements, and provided proper ventilation, rest pauses, and suitable apparatus to ensure safe and easy working. He believed that industrial welfare was the expression of industrial conscience, willing and anxious to uplift our factories and warehouses and bring business to a grand conception of its duties to those it employs, and to the public at large. And, in connexion with the welfare work at their own factories, he desired to pay tribute to the local medical practitioners for their coöperation.

Miss SLOCOCK (H.M. Inspector of Factories, Leicester) said the reaction to monotony was a matter of temperament. One of the troubles in modern industry was the loss of the creative sense, because the worker did not see the finished work as a rule. In this respect weavers had an advantage, which accounted for that work being popular. With repetitive work had come shorter hours, and to-day under modern conditions the workers appeared to be brighter and more alert even when performing monotonous jobs. Monotony could hardly be considered alone, and there was no agreement as to the adverse effect on health of repetitive work. A good environment, good working conditions, and a friendly atmosphere in the factory were more important.

Miss K. DOWDING (Chiswick Polish Co., Ltd.) thought very little monotony was felt by girls in well-organised factories, but some girls were constitutionally or emotionally unfitted either for working on machines or at piece-work. Return to craftsmanship was impossible and the modern girl disliked the solitary spinning-wheel. Love of machines was not now a male perquisite only. The placing of operatives suitably was being more and more attempted, for it was realised that one discontented worker might affect a whole group and spoil the output. The feeling of being absorbed into a vast impersonal soulless mechanism had to be combated by recreations and the holding of individual positions in outside activities. Girls were favourably influenced by working with their friends, even if they could not talk to them. The personal element must not be ignored. Monotony was not a problem by itself.

Dr. STUART MACKINTOSH (Hampstead) discussed the subject from the racial and temperamental point of view.

Dr. J. JENKINS ROBB (Bourneville) thought the study of psychology in labour might easily be overdone. The worker was suspicious of repetitive work because it increased profits more than wages. The stress of modern industry affected all ranks of labour, including the highly paid jobs.

Dr. LEONARD LOCKHART (Boots' Pure Drug Co.) uttered a warning against labelling vague ill-health as "neurasthenia." It was difficult to unstick the label. He appealed for the coöperation of the general practitioners with the works doctors and for the recognition of the latter under the Insurance Act.

Dr. CHRISTINE MURRELL said the highly educated worker should be kept out of monotonous and unintellectual tasks by vocational tests.

Dr. C. FORBES (Aberdeen) pointed out that instruction in industrial medicine was needed for insurance practitioners.

Sir THOMAS LEGGE (Chief Inspector of Factories) reviewed the history of the guilds with their care for the sick, their efforts to promote good work and pride and joy in the work, and their strict regulations, designed to foster these aims. The guilds supplied people with what they ought to want, not with what they might think they wanted. Welfare work was now bringing back "the interest in the job" lost during the industrial revolution of the last century. Monotony had not come much before him and took a back seat in comparison with the removal of gross defects in environment.

Dr. H. B. BRACKENBURY said monotony was not merely repetition. The mental effects of monotony might need to be dealt with without waiting for environment to be made perfect. The pride in the finished product might be replaced in various ways. The finished article should be brought to the notice of all who had had a hand in turning it out, so as to stimulate communal pride in the team work and the life of the factory. Better education in art, such as they were getting in their schools, would stimulate artistic pride in the factory and the articles it produced. To many people their leisure was more monotonous than their work. Attention to recreations and activities outside the work of the factory would help to bring about a proper attitude towards life.

At the afternoon session the Section discussed the

*Physical Fatigue Factor.*

Mr. W. L. HICHENS (chairman of Cammell, Laird and Co.), a member of the Industrial Fatigue Research Board from the early days, opened the debate on this subject. The reproach, he said, that industry in this country had not made enough use of science was probably true, and they certainly had not given enough attention to the human factor. It was not enough for employers to want to make their workers healthy and wealthy; they needed to make them contented, and contentment did not come from mere health and wealth, but from the knowledge that the conditions under which a man's living was being earned were the best possible, and that every consideration was being paid to him as a human being. The name of the Industrial Fatigue Research Board was perhaps unfortunate, but it had done good work, and could do much more. But the Board needed encouragement not only financially. They wanted more interest taken in their work and to have a wider sphere of influence. No industries nowadays involved serious injurious fatigue to normal workers in good training. Nature made a man go slower when fatigue began to operate. During the war the special effort and the longer hours affected the work, but did not damage appreciably the health of the workers. Shorter hours brought better work. Fatigue in strenuous work might be a predisposing cause to disease. So far as possible all unnecessary effort must be saved by the substitution of machines for hand-

labour, and machinery must be studied from the point of view of the comfort and convenience of the workers. Mr. Hichens went on to refer to the work of Taylor and the Gilbreths in America. In that country the workers took more interest in scientific management and time and motion study, and the trade unions helped by appointing their own investigators. But research work of the kind necessitated was slow and had to be continued over long periods. Workers must be got to appreciate that posture and change of posture were important. Local fatigue of muscles might be alleviated by bringing in other groups of muscles. Rest pauses were important. Hours of labour had unfortunately become a political question and were not studied scientifically. Temperature affected output, which was greatest in winter. In hot mines the output was lower than in cooler. Amongst other matters needing study were the incidence of sickness, the proper lighting of factories with the prevention of eye-strain, the provision of baths, vocational selection and guidance, and the liability to accident. The Government, employers, and workers must encourage the Board and secure research on a bigger scale.

Dr. H. M. VERNON, investigator for the Board, followed with a paper, illustrated by lantern slides, dealing chiefly with workers engaged on strenuous work at high temperatures in the tinplate industry, in steel melting on open-hearth furnaces, and in coal-mines. His slides showed graphically how the output decreased in the hotter months of the year and how very greatly this decrease was lessened by good ventilation and attention to cooling. If the ventilation and cooling were not adequate, he showed, the fatigue induced caused excess of sickness, chiefly displayed in rheumatism and respiratory diseases. Regulations for rest pauses were possible in light repetitive work, but not in this heavy work. In some cases the rests were taken with regularity, but the coal-miners took their rests irregularly.

In closing the Section the PRESIDENT made reference to telegraphists' cramp and the value of counter-action by bringing into play other groups of muscles. He laid special emphasis on the valuable results which would accrue from attention to vocational selection.

# Reviews and Notices of Books.

RADIOLOGY.

*Radiotherapy in Relation to General Medicine.* By FRANCIS HERNAMAN-JOHNSON, M.D. Aberd. Oxford Medical Publications. London: Oxford University Press. 1926. Pp. 211. 5*s*.

THIS small handbook, directed to the general practitioner who wishes to know something of the theory and application of radiotherapeutics, is written by one who has great and wide experience of the subject. Since the advent of the intensive methods of X ray treatment the complexities of the mechanism and mathematics have overshadowed the medical aspects of the subject. As Dr. Hernaman-Johnson puts it: "the radiotherapeutist has in the past of necessity been over much preoccupied with the technique of his art"; the author attempts to write as a physician practising radiology. The result is not a text-book, but a common-sense, individualistic, and readable exposition of the present position of radiotherapeutics in relation to general medicine. It is obvious that the writer has taken pleasure in setting forth his views unhampered by the technicalities of his subject. The short chapter on the essential elements of the physics of radiation has the visé of Dr. G. W. C. Kaye, of the National Physical Laboratory; in the chapters on the effects of radiation on the normal cells and the nature of disease, Dr. Hernaman-Johnson has the support of Dr. Mottram, the Director of Research of the Radium Institute; Prof. Russ, of the Middlesex Hospital, has read through Chapter IV. with a view to securing accuracy as to the references to animal experiments in relation to cancer.

The rest of the book is a well-reasoned statement of the author's own practice in relation to the treatment of cancer in various regions, in pelvic conditions such as uterine fibromata, in hyperthyroidism, affection of the ductless glands, tuberculous glands, and many other diseases. The treatment of superficial conditions receives only passing reference. Of deep therapy, as enunciated by the Erlangen school, the author states that it is quite unsuccessful in the treatment of the hopeless cases of cancer as we see them, but he is prepared to believe that these intensive methods may be of value for early cancer of the uterus, a condition which is rarely passed over to the radiologist in this country. He holds that this particular technique for deep therapy should only be employed for comparatively small circumscribed areas, the constitutional reaction from the treatment of large areas making the procedure unjustifiable. Obviously, deep therapy has a definite place in medical treatment, particularly of cancer, but the kill or cure method of using it as laid down by the Erlangen school should be replaced, the author holds, by a much less drastic technique, the big doses being divided over several days.

We can strongly recommend this small volume as a clear statement of the medical side of radiotherapeutics.

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*The Technique of Oral Radiology.* By CLARENCE O. SIMPSON, M.D., D.D.S., F.A.C.D. St. Louis, Mo. London: Henry Kimpton. 1926. Pp. 207. 21*s*.

THE use of X rays in dentistry has progressed very rapidly since the days, not so long ago, when specially prepared dental films first became available, days when dark-room assistants cut and wrapped pieces of X ray plates or ordinary photographic films for each exposure. In this volume we have a book of 200 pages entirely devoted to the consideration of this one branch of radiology. With 165 illustrations and a clearly expressed text, the technique is explained simply and clearly, and in a way that should be useful, particularly to those who have not expert knowledge; even for those who are experienced there are many tips which will prove useful. We would specially commend the chapter on Systematic Procedure as being concise and most helpful. It is interesting to note that the author uses an ordinary X ray tube stand for this work and not one of those specially designed for dental purposes. The last chapter is devoted to a wise discussion of protection from the dangers of X rays, and, if the author's recommendations are carried out, the operator should not receive any radiations which will do him damage.

Those interested in dental radiography will learn much from this work.

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INSTINCT: A STUDY IN SOCIAL PSYCHOLOGY.

By L. L. BERNARD, Professor of Social Psychology, University of Minnesota. London: George Allen and Unwin. Pp. 550. 15*s*.

THE aim of this book is to show the fallacies supposed to underlie current conceptions of instinct. The word is so widely and loosely used that attack is easy, but the argument centres on McDougall's well-known work, which attempted to build up a social psychology on the basis of instincts common to man and the lower animals. The author regards instincts as reflexes or action patterns which in man are mostly vestigial and so disintegrated by the encroachment of habit that the theory of instinctive control is valueless when applied to sociology. Yet he concludes that "The real task . . . is to discover the mechanisms by means of which the child and the citizen build up their habits upon the basis of the instincts, directly or indirectly, and by means of which one habit or set of habits is transformed into another." This is a fair expression of the aim of

McDougall's "Social Psychology," but from occasional references to his opponents' views as mystical or metaphysical one judges that the real point of difference is that Prof. Bernard is one of those who dislike the psychology that pries into human motives. In the endeavour to escape such a psychology he is driven to use curious conceptions, as when he writes (p. 466): "The activity attitude, or even the organisation of the neural processes along the lines of thought, cannot be immediately repressed or undone." This goes beyond the world of physics and would be scorned by metaphysicians; perhaps it might be described as paraphysics.

The theory of instincts is far from satisfying and may undergo many changes or ultimately be cast aside, but it serves too useful a purpose to be relinquished as a result of purely destructive criticism.

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DISEASES OF THE KIDNEY.

*Pathologie und Klinik der Nierenerkrankungen.* Second edition. By Prof. FRITZ MUNK. Vienna: Urban and Schwarzenberg. 1925. Pp. 661. M.25.50.

THIS important treatise is the second edition of Prof. Munk's well-known work on Bright's disease and kindred disorders. There is no reference book in English which deals with the subject so broadly and at the same time in such detail, and since the first edition has been out of print for some years its successor has been eagerly looked for. The first 150 pages deal with the physiology of renal secretion, the urine in health and disease, and functional efficiency tests. The rest of the book is concerned with Bright's disease in its various forms. The author divides Bright's disease into the three main categories of Nephrosis, Glomerulo-nephritis, and Interstitial Nephritis as a manifestation of Essential Hypertension.

As an original contribution to medical literature the section dealing with nephrosis is the most important because, although Volhard is responsible for naming the group of renal conditions which are included under this term, it was Prof. Munk who first made the distinction for clinical purposes between lesions which are initially or primarily degenerative and those which are definitely inflammatory. The distinction is largely made on a pathological basis, but the author maintains the distinction clinically, and he takes syphilis of the kidney as the classical example of nephrosis; he speaks of the syphilitic virus as the cause of typical pure lipoid-nephrosis, using the term in both a pathological and clinical sense. A discussion of the term "nephrosis" and the meaning given to it will be found in a short introductory chapter (pp. 173–184) preceding the detailed discussion of Bright's disease, and again in the sections describing lipoid-nephrosis. In the rest of this chapter there is a good deal of perhaps unavoidable repetition. The chapter on nephritis (pp. 365–496) is chiefly concerned with glomerulo-nephritis, and the main feature of the author's presentation of this section is his insistence on the now generally accepted view (which he has held for many years) that nephritis is a general disease in which the kidneys are chiefly affected. The account on p. 405 of cases of Bright's disease in which there was no albuminuria or cylindruria is interesting in this connexion. The last chapter deals with Interstitial Nephritis as a manifestation of Essential Hypertension. These terms are so open to alternative construction that the actual phrase used in the text may be given: "genuine Schrumpfniere" als Teilerscheinung der "genuinen Hypertonie" (author's inverted commas). The view is put forward that anatomically interstitial nephritis is really a disease of the blood vessels, in contradistinction to the older view that it is primarily a disease of the kidneys.

It will be evident from this brief survey that Prof. Munk presents each of his three main subjects as a thesis. Nephrosis is characterised by its being a degenerative as opposed to an inflammatory change in tissue structure; glomerulo-nephritis is a disease of the whole body; interstitial nephritis classed with essential hypertension (there is no reference to the late Sir Clifford Allbutt's work) is a disease of the blood-vessels. Bright's disease as a name for the whole group finds no other term to replace it, and yet as a disease of the kidneys *ueberhaupt* it may seem to the reader of this treatise that it ceases to exist.

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EDWARD THRING: MAKER OF UPPINGHAM SCHOOL.

By W. F. RAWNSLEY. London: Kegan Paul, Trench, Trübner and Co., Ltd. 1926. Pp. 103. 3s. 6d.

THE life of a great schoolmaster is a medical subject, and no great schoolmaster ever realised more acutely than Edward Thring the value of education in its bearing upon the wholesomeness of the future career. That the body should be as keen and alert as the mind was the inspiration of his work, as it is the physician's ideal.

Thring's biography has already been written by Sir George Parkin, the organising secretary of the Rhodes Scholarship Trust, and a keen enthusiast for progressive education. Parkin was a profound admirer of Thring, but he knew him personally hardly at all, and had to rely on diaries for the more intimate details of his subject. When the biography appeared it was not felt to be an adequate picture; it contained Thring's meditations on many of the obstacles that beset him as a reformer, but did not convey the intensely human and active side of his life. Mr. Rawnsley, the son of Thring's friend, a pupil at the dawn of the transformation of the local grammar school into a leading public school, and later a house-master at Uppingham, draws a vivid picture of the great little man who for thirty-four years was the hero and terror of his charges: his strenuous devotion to duty and his power of putting his heart into holiday-making, his merriment and his causticity are faithfully recalled.

Thring's father was a Somersetshire squarson, and his mother a descendant of seven generations of clergymen; he was born at a time when educational methods were based on severity and characterised by absence of sympathy. Many medical men find that these methods are to-day over-reversed, and that they have to deal too often with physical troubles due to spoiling, but there is no doubt that in early Victorian days a rigorousness towards children survived that was alike an anachronism and a hurtful thing. It was his memories of his early life that made Thring long to make the sojourn of boys at school a more human matter. Not that he himself seems to have suffered personally at Eton, either as an Oppidan or a King's Scholar; he emerged as a distinguished classic, an adequate sportsman, and a happy man. But he was profoundly humane, and he knew that many of his school friends had been miserable, and that it was no part of school life at that time to take note of such cases. He took Holy Orders upon graduation, and in 1853 was offered the headmastership of Uppingham, an ancient grammar school which at the time was reduced to 25 boys. His stipend was £150, and he had little personal means. He must have accepted the post, primarily because he felt that he had what is often described slightingly as "a call" to the cause of education, for Thring was never in any doubt that he was doing work for God. In the second place he entered upon his headmastership in the spirit of adventure. He had theories and views upon education, and he wished to see them in practice. He put them to the test and succeeded in increasing the number of boys to 300—beyond which figure he always refused to go for an upper school—and it is the story of this work which Mr. Rawnsley tells very briefly but none the less thoroughly. The flight of Uppingham to a Welsh fishing village during the resewering of the Rutlandshire town was a famous example of organisation, though the circumstances which brought about the migration are, fortunately, such as modern public health administration have made impossible.

# THE LANCET.

*LONDON: SATURDAY, JULY 31, 1926.*


## THE REPORT OF THE LUNACY COMMISSION.

THE Report of the Royal Commission on Lunacy which appeared [1] last Tuesday is unanimous and closely follows the lines expected by those who attended its public deliberations last year, for in distinction to some other recent commissions the evidence was largely taken in public session. The Commission was appointed exactly two years ago to inquire into the existing law and administrative machinery in connexion with certification, detention, and care of persons of unsound mind, and to consider the possibility of provision for their treatment without certification; and it is gratifying that the Commissioners in their Report deal with the whole question of mental disease as a public health problem, stating explicitly that there is no clear line of demarcation between mental and physical illness, and calling on the community to revise its attitude towards mental illness and to reconsider its duty to the mentally afflicted. For whereas the keynote of the past has been detention of the lunatic, the Commission recognise that the keynote of the future must be prevention and treatment of mental disease in its earliest stage. The first recommendation in the Report implies, therefore, the complete recasting of the lunacy code in order that the treatment of mental disorder may approximate as nearly as may be to the treatment of physical ailments, using certification as a last resort, simplifying procedure to secure uniformity for rich and poor alike, and providing facilities for treatment without certification for a short period when the necessity for this public safeguard is still in doubt. Regarding mental disease from the public health standpoint, the Commissioners hold it unfair to lay on local authorities the whole cost of carrying out preventive measures, and recommend an Exchequer grant conditional on effective supervision by the Board of Control. To make treatment more efficient the Report advises the provision of relief for medical superintendents from absorption in administrative work, and the enlargement of medical staffs with liberal granting of study leave and improved financial prospects, while preference may be exercised in selection for these posts in favour of those with previous general hospital experience. The Commissioners insist on the need for material increase in the nursing staff, and for recruiting or retaining in the care of the mentally sick those with a real gift for mental nursing, even if unable to pass the examination standard for general nursing.

In regard to the fear, largely responsible for the inquiry, that under the present system there has been a risk of wrongful certification and a lack of kindness and consideration in treatment, the Commissioners are able fully to reassure the public, for they state that instances of sane persons being certified as insane are of the rarest occurrence and that, although isolated instances of cruelty have occurred, there is no foundation for the suggestion that ill-usage has been deliberately or systematically practised. At the same time they point out that, while the public must be safeguarded against the presence in their midst of persons of unbalanced mind and dangerous tendencies, the reluctance is inevitable of medical practitioners, in the present state of lunacy law, to be involved in the certification of the insane, owing to the risk of legal proceedings. They therefore propose that doctors shall not be liable to be proceeded against in a civil or criminal court unless they have acted in bad faith or without reasonable care, and that any such proceedings against them should be stayed by summary application unless the court is satisfied of wrongful motive or neglect of precaution. The Commissioners accept the need for the existence as a separate organisation of a Board of Control, subject, however, to general control in matters of policy by the Minister of Health, but they think that the Board should be reorganised so as to consist of a small headquarters staff of four or five Commissioners, assisted by a much larger visiting staff of Assistant Commissioners. Every facility is to be given for making the public familiar with the inside of the mental hospital by means of voluntary unofficial visitors of suitable experience to be appointed by the authorities of every institution, liberty being given to visiting committees to coöpt suitable persons who are not members of the local authority, at least two of whom should be women.

The Report is a bold though temperate acknowledgment that the existing lunacy administration has not kept pace with increasing sociological experience, and especially has not evolved in proportion to a vast modern growth of medical knowledge both general and in the field of medical psychology. Yet some of the suggested methods of reform have already been adopted by enlightened mental hospitals. Many others would now be in working had it not been for financial difficulties which have become more acute in recent years. Most of them have been recommended for long by the Medico-Psychological Association. It will be no small relief and satisfaction to the mental hospital service if measures which have so far been hardly achieved by constant pressure and scrupulous economy now become statutory duties. The early treatment of mental disease without certification has already made a beginning in various places in spite of legal hindrance, and the recommendations of the Commission as a whole will have the solid support of the medical profession. But early treatment and avoidance of detention under certificate can only be achieved when an intimate knowledge of the first symptoms of mental disorder becomes the common possession of the whole medical profession, and we may call attention again to our issue of a Special Supplement on Early Mental Disease, written by those with authority and knowledge expressly to meet this situation. The Supplement appears simultaneously with the Report of the Commission.

[1] Report of the Royal Commission on Lunacy and Mental Disorder. Cmd. 2700. H.M. Stationery Office. 1926. 3*s*. 6*d*. The report is signed by Mr. H. P. Macmillan, K.C. (Chairman), Earl Russell, Sir Humphry Rolleston, M.D., Sir Ernest Hiley, Sir David Drummond, M.D., Mr. Nathaniel Micklem, K.C., Mr. W. A. Jowitt, K.C., Mr. H. Snell, M.P., Mrs. Anna Mathew, and Miss Madeleine J. Symons.

## POVERTY, NUTRITION, AND GROWTH.

CURRENT opinions on social problems are mostly based on small series of observations by individuals. Nowadays, however, evidence is being collected on a larger scale. Groups of investigators dealing statistically with great masses of material can form conclusions comparatively free from personal bias, and it is interesting to see how far research scientifically conducted really bears out the generalisations usually regarded as truths. The first results of one such undertaking are now being published.[1] After six years of work the Scottish Committee for Child Life Investigation, under the chairmanship of Prof. NOËL PATON, has produced a report so elaborate as to justify its exceptionally interesting conclusions. The investigation is described as "the first extensive attempt to estimate the influence of various environmental conditions on the growth and nutrition of the slum child." It was carried out, under the general direction of Prof. PATON and Prof. LEONARD FINDLAY, by a number of doctors, statisticians, and health visitors, and the data were collected in the poorer quarters of Edinburgh, Glasgow, and Dundee by means of house-to-house visits and with the help of child welfare centres. In each of the towns over 93 per cent. of the families investigated lived in one- or two-roomed houses, but care was taken that those selected should be as far as possible a random sample of the slum population. For purposes of comparison investigations were also made into the condition of the children of miners and agricultural labourers in various parts of Scotland. The whole formed part of a scheme for the study of child life which was initiated by the Medical Research Council, but unfortunately no similar work was carried out in England at the same time. The report is valuable not only for its lucid description of this work done in Scotland since 1919, but also because it summarises carefully the conclusions of previous investigators. Unfounded assumptions are absent, and this may explain why the evidence gives little support to numerous prevalent ideas.

Many observers had previously shown that in great cities the children of the poor are lighter and smaller than those of the wealthy, and that they also compare unfavourably with those of their own social class who are reared in the country. About 80 per cent. of our national population are now town dwellers. Emigration from the country has almost come to a standstill; the towns are breeding more and more their own populations, and there is some indication, says the report, that the small size of town children is in part at least an inborn characteristic. A stunted population might conceivably be a result of the survival of those best fitted for town life. Unfortunately no figures are available to show the relative weights and heights of town and country children at birth, either in Scotland or elsewhere, but the present inquiry suggests that there is some delay in the rate at which the town child grows between birth and the age of 18 months. During this time there seems to be a lag in development, though afterwards growth goes on as rapidly in the town as in the country child; but the Scottish Committee has been unable to correlate the slowing of growth with any particular environmental factor chiefly operative before the middle of the second year of life. The suggestion that town infants show this retardation because they do not get enough milk does not explain the facts, for the amount of milk consumed by the families of rural miners—who show no such retardation—is even smaller. "Perhaps the most prevalent belief," says the Committee, "is that the small size of the town child is due to a defective supply of suitable food, but the satisfactory rate of growth after 18 months does not support this view." In a certain number of cases in which it was possible to correlate the energy value of the food with the weight of the children, it was found that if the diet fell much below the equivalent of 2600 calories per man per day the nutrition of the children did in fact begin to suffer. On the other hand, in Glasgow a family diet yielding only 2500 to 2700 calories per man per day is the average in the slum districts, and on this allowance, it is noted, the children grow just as fast as the country children who get more than 3000 calories. It is also rather surprising to find that after the ninth month infants which have been fed at the breast show no superiority over those which have been weaned early; but before this time the breast-fed infants are stronger, and there is the possibility of a selective mortality to be borne in mind. Careful investigation supported the finding of Prof. KARL PEARSON that there is little or no connexion between the health of the mother during pregnancy and the nutrition of the child during the first year of its life. The physique of the child is affected to a small extent by variations in the general health of the mother, but that is because sickly mothers cannot care for their children properly. And here we reach one of the most positive conclusions of the report. Maternal efficiency was found to have a more definite effect on the nutrition of the children than any other single factor studied. The chief way in which overcrowded homes and small air space hinder the development of children is by influencing the moral and the activities of their mothers. On the other hand, it may be feebleness of character that keeps the parents in a bad environment. Amongst agricultural labourers and rural miners, whose houses are not so overcrowded, the proportion of inefficient mothers was very small, and it appeared that the few women whose work was unsatisfactory were those whose husbands were badly paid and who had overcrowded homes. In Scotland the families of the rural coal-miner are brought up under environmental conditions far better than those of the slums. They spend more time in the open air, they are better fed, and nearly all of them are reasonably well looked after in their homes.

Poverty brings to bear on the child many forces not easily resolved into their components. Of those so far considered—overcrowding, underfeeding, and maternal inefficiency—only the last was shown by the investigators to be definitely correlated with the children's physical condition. They expected to find that nutrition would vary as the family income, but no such direct relation was found. The contention that a mere increase of wages would, per se, lead to better growth of the children is therefore not supported, and this is one of several conclusions of political as well as medical interest. Prof. PATON and Prof. FINDLAY set out to gain definite knowledge which would indicate the proper approach to social problems as they affect children. Are the large sums spent on child welfare and other schemes directed into the best possible channels? They report:

"The provision of improved housing accommodation by permitting a larger proportion of mothers to care more efficiently for their children and homes might prove to be a beneficial measure. What is not demonstrated is that simple increase of income would be followed by improvement in the condition of the children. Bad parents, irrespective of their incomes, tend to select bad houses as the money is often spent on other things. The saying that 'what is the

[1] Poverty, Nutrition, and Growth: Studies of Child Life in Cities and Rural Districts of Scotland. Medical Research Council. H.M. Stationery Office. 1926. Pp. 333. 10s.

matter with the poor is poverty' is not substantiated by these investigations, which show that the problem of a slum population is far more complex than such a statement would indicate."

Current teaching, they suggest, gives too much, rather than too little, weight to the environmental factors which, theoretically at least, it might be possible to remedy by economic adjustment; in spite of conditions around him the slum child tends to develop on the lines of his parents. Both for its interesting conclusions and as a record of well-conceived investigation the report deserves wide circulation. It is a work of art, because it depicts elusive and complicated phenomena in words and figures, and to read it is an education in scientific method.

## THE B.M.A. MEETING AT NOTTINGHAM.

NOTTINGHAM was something of a surprise to the many hundreds of medical men and women gathered there last week at the ninety-fourth annual meeting of the British Medical Association. Although a very important industrial centre, and happily in most directions a prosperous one, the stigmata of industrialisation are scarcely to be observed in a city of cleanly aspect with pleasant undulations and large open spaces, and the casual visitor may remain unaware that there are several coal-mines within the municipal boundary and at least one hundred hosiery factories within the county, apart from the mass production of fine chemicals, tobacco, and cycles. Most of the meetings of the Association took place in the University College which, through the generosity of Nottingham's industrial magnates, is shortly to be removed to a new and admirable site where, it is hoped, a great North Midland University may soon come into being. Happily, the hospital buildings by successive enlargement have kept in touch with the increasing population and with the growing demands of scientific medicine, a new out-patient department with a magnificent central waiting-room is approaching completion, and when the time comes these buildings are fit to take their place on the clinical side of the medical school which need hardly wait long to appear after the grant of a charter to the University.

The sectional meetings covered a wide range of subjects, many of them of immediate practical interest to the general practitioner of medicine, and the Duke of PORTLAND was no doubt right in describing the meeting as a magnificent opportunity offered to general practitioners to learn the latest advances in medicine and to hand them on in turn to their patients. Several sections took on an international character in their discussions, notably the Section of Anæsthetics, which utilised the opportunity of a visit to Europe of a number of transatlantic anæsthetists, a joint meeting with the Section of Surgery being arranged to discuss the principles of anæsthesia in abdominal surgery as they have not previously been discussed in this country. While we have many excellent methods of anæsthesia, most of them fairly easy of application, and while the art of anæsthetisation is rising to the status of a science, it has still to be remembered that relaxation and quiet breathing, so essential to the abdominal surgeon, are not the only things to be kept in mind, for the patient is something more than an abdomen, and has a brain, a heart, kidneys, and a liver, which may be impaired by the anæsthetic employed. Several American and continental delegates set out the practice of the newer gaseous combinations whose attractive novelty is not their only justification for employment as analgesic agents. In the Section of Medicine, one session of which we are able to report this week, a discussion on blood transfusion in the treatment of disease took on a wider scope from the presence of Prof. R. CRUCHET, of Bordeaux, and Prof. E. A. GRAHAM, of Toronto, while Prof. CARTER WOOD, of Colombia, communicated his experimental results with lead in the treatment of malignant neoplasia to a later session of the same section.

On the administrative side this year's Representative Body had no burning question to discuss. Dr. BRACKENBURY, as chairman of the Body, was able to report, with perhaps a twinge of regret from a practised controversialist, a year of smooth passage in the affairs of the Association. Only the Memorandum of evidence submitted to the Royal Commission on Local Government came in for some hostile criticism and was referred back to the Council for further consideration before action. All were agreed as to the principle of separating health services from other administrative services and then combining them, first centrally and then locally, under one form of administration, and agreed also on the impracticability of the ideal parcelling out of the country into fresh areas, each with a large town as centre; but the Medico-Political Committee of the Association, through its Chairman, voiced its disfavour of the proposal to give to county councils control of all health matters within the county even should it contain such a large borough as Willesden with its 200,000 inhabitants and its successful autonomous authority of long experience. There was some feeling in the Body that the proposals in the Memorandum might smooth the way for a State Medical Service, in spite of Dr. BRACKENBURY's categoric assurance that the extended employment of local practitioners in auxiliary services and clinics should act as a bulwark against a State service. In his admirable presidential address, which we published last week, Mr. HOGARTH championed the principle of voluntaryism, so triumphantly maintained in hospital practice, and stated the one urgent need of the Insurance Service to be the linking up of the insurance practitioner with the consultant physician and the consultant surgeon in order to give the insured patient the benefit of specialised as well as general medical knowledge. He also forecasted the rapid extension of the system of paying wards in hospitals. The key-note of his address was the consistent aim to raise the general standard of health among all ages of the community and especially among the adult workers. This aspect of health work was reflected in the remarkably interesting sessions of the Section of Medical Sociology which we also briefly report in this issue. The discussion was piquant for the frank line taken by speakers, both lay and medical, in denying the existence of harmful monotony in the life of factory operatives under proper conditions. One prominent welfare worker, indeed, challenged the right of those who chose such a sport as angling for their recreation to brand as monotonous any repetitive occupation. If only the work is done under healthy conditions, and the worker has the opportunity of honest pride in the finished product, medicine can say little, it was urged, against routine occupation which leaves the worker free to develop his powers of body and mind in his leisure time. Most of the world's work is routine work, said Mr. HOGARTH in his address, and the conditions of factory life as observed in Nottingham during the visit of the British Medical Association no doubt gave many of its members the opportunity of reconsidering some of the almost prejudged questions of industrial fatigue. The meeting of the Association, although not outstanding in any one direction, was felt to be a thoroughly useful and instructive one.

# Annotations.

"Ne quid nimis."

## SYMPATHETIC OPHTHALMIA.

THE discussion on sympathetic ophthalmia at the recent Oxford Ophthalmological Congress, briefly reported in our columns last week, should prove useful. The opening address was given by Mr. Malcolm Hepburn, who began by referring to the report of a Committee of the Ophthalmological Society in 1886, the gist of which was that when "keratitis punctata" develops in cases of traumatic cyclitis, the only certain measure to prevent complete blindness is excision of the wounded eye. The general trend of Mr. Hepburn's argument was in favour of more conservative treatment. Not every case of cyclitis following injury, he said, even when keratic precipitates are observed, is liable to cause sympathetic disease. How, then, are we to know which eyes can safely be left? Certain facts are undisputed. A penetrating injury which causes cyclitis, whether due to accident or operation, is occasionally followed after a few weeks by a cyclitis of the fellow eye which tends to progress to blindness and in the majority of cases is incurable. This catastrophe is at the present time exceedingly rare, probably owing to the improved standard of asepsis generally adopted in the treatment of wounds; it was almost unknown during the war. Nevertheless, it does occasionally occur, and until recently there has been no certain method of diagnosing which wounded eyes are liable to cause sympathetic disease and which are safe. The consensus of opinion among ophthalmic surgeons has been that those wounded eyes in which keratic precipitates are observed are peculiarly dangerous, and it has generally been considered very risky for a patient with a wounded eye in which the symptoms of an active cyclitis have persisted for as long as three weeks to retain it, even if it still has useful vision. On the other hand, in the case where symptoms of cyclitis have already developed in the fellow eye, since the vision of the exciting eye may ultimately prove to be the better of the two, it is generally thought better to retain it. Obviously, the need is for some means of ascertaining which eyes are actually capable of conveying the infection of sympathetic cyclitis to their fellow. If nothing is done until there are actual signs that the second eye is infected, it may be—and according to some certainly will be—too late. On the other hand, there is now, said Mr. Hepburn, a general consensus of opinion against the possibility of sympathetic inflammation developing many years after an accident, so that we are justified in leaving this part of the subject behind us. If the condition of a wounded eye is obviously hopeless, or if there is no perception of light, it should, of course, be excised. For other cases there were formerly no satisfactory means of certain diagnosis. Recently there has been an improvement in this respect in two directions. It is well known that in certain protozoal diseases—notably syphilis and malaria—there is a definite change in the composition of the blood, the chief feature of which is a marked increase in the number of large mononuclear cells. Some years ago Mr. S. H. Browning, working at Moorfields Hospital, began testing the blood in all cases of eye injury in which the danger of sympathetic disease was considered possible. It was found that in all cases in which the disease was really of a sympathetic nature an exactly similar change in the blood count was observed—i.e., a very marked increase in the number of large mononuclear cells. Acting on this knowledge, it is now customary to treat all cases of eye injury in which this particular condition is found very energetically with full doses of salvarsan or one of the similar arsenical injections. The other recent advance in diagnosis has been made possible by the high magnification under which details can be seen by the aid of the slit-lamp and microscopy of the living eye. Mr. Harrison Butler said that he relied chiefly on this method in difficult cases in deciding whether or not to excise a wounded eye. When sympathetic disease is present, the slit-lamp shows the presence of albuminous matter in the aqueous. It reveals the presence and nature of keratic precipitates deposited on Descemet's membrane and the presence of cells in the fluid of the retro-lental space. He believes that by these signs it is possible to make a definite diagnosis. The existing divergence of opinion about treatment was brought out in the Oxford discussion. No one disputes that excision is not, in many cases, the only possible treatment or that in many others it is the only wise one. The point at issue is whether, once the diagnosis of sympathetic disease has been established, it is ever possible by any means other than excision to prevent the spread of the infection to the second eye. Some, represented at the Congress by Mr. Harrison Butler, maintain that it is not. Others, represented by Mr. Hepburn and Mr. Browning, hold that sometimes it may be. As to the preliminary necessity of accurate diagnosis, there is no divergence of opinion, and Mr. Browning's method of the blood count should always be undertaken in doubtful cases. Where the test proves positive, the ophthalmic surgeon is faced with the responsibility of advising either excision or treatment with arsenical injections. In Mr. Browning's experience many cases have been treated successfully with arsenic even after the appearance of the beginning of cyclitis in the sympathising eye. At any rate, it seems to be established that the success which has already attended this treatment is sufficiently remarkable to necessitate a revision of old ideas.

## BILATERAL SELECTIVE ARTIFICIAL PNEUMOTHORAX.

THE treatment of pulmonary tuberculosis by "selective collapse" under negative pressure of both lungs was first proposed by Parry Morgan[1] in 1913. He pointed out that the lung was kept at rest only when the pressure was maintained positive, that as soon as the pressure became negative the healthy parenchyma recommenced to expand and function, and that the collapse then became selective (differential). Since then, the trend of opinion has been against high pressures, although complete collapse has been sought and no doubt obtained at refills. No serious attempt appears to have been made in this country to test the value of Parry Morgan's method of treatment. On the other hand, continental and American workers have independently proposed the method, introducing the terms elective and low pressure pneumothorax, and selective collapse. Their work has been followed up so that outside this country there is now a considerable literature on the subject.

In a contribution to the *Presse Médical* of April 24th, 1926, Tobé and Terrasse consider that the possibilities of bilateral pneumothorax should be more realised as it affords a chance of combating with success a complication considered up to the present as beyond the resources of our art. Having discussed the various ways in which infection in the opposite lung develops, they point out that the "alternative" method of doing pneumothorax—viz., letting the lung originally collapsed expand and then collapsing the more recently infected lung—is often not satisfactory, the reason being that the lung originally collapsed is almost always allowed to re-expand too soon. Bilateral pneumothorax has been made possible by the realisation that a small pneumothorax is selective in action, the affected and fibrosed part of the lung collapsing before the healthy areas. Selective action can be obtained on both sides; on the recently affected side by the introduction of small amounts of gas, and on the originally collapsed side by lengthening the intervals between the refills, which allows the

[1] THE LANCET, 1913, ii., 18; Quarterly Journal of Medicine, 1917, vol. ii., No. 41.

healthy parenchyma to re-expand. Selective collapse is not always possible, certainly not if a positive pressure is required to effect collapse. When starting the second pneumothorax and so throwing out of action still further lung parenchyma, the greatest prudence is necessary and the process must be extremely gradual. The optimum pressure varies with each individual; constant X ray screen examinations are essential. It is obvious that the method of treatment requires more work and care than is necessary for complete collapse. This should not be a bar to a more extended trial in this country, especially as it has been shown that the method does not involve undue risk. A word of warning should be given. Good results, although they may occasionally be seen, cannot be reasonably expected when the disease is extensive in one or both lungs, or where adhesions would make satisfactory collapse under positive pressures impossible. In such cases efficient differential partial collapse cannot be obtained.

## SIXTH BRITISH CONGRESS OF OBSTETRICS AND GYNÆCOLOGY, 1927.

THE Sixth British Congress of Obstetrics and Gynæcology will be held in Manchester on April 27th, 28th, and 29th, 1927. The principal subject for discussion will be "The Treatment of Inflammatory Conditions of the Uterine Adnexa," and this will occupy the first day of the meeting. The remaining days will be devoted to the reading of short papers on obstetrical and gynæcological subjects and demonstrations of surgical operations. A museum of pathological specimens of special interest is also being arranged. Those intending to take part in the discussion, or to read short papers, are invited to send in their names together with the title of any proposed contribution not later than March 1st, 1927. The secretaries of the Congress are Dr. Daniel Dougal, M.C., 11, St. John-street, and Dr. John Bride, 2, St. John-street, Manchester, to whom all communications should be addressed.

## ALCOHOLIC NERVE BLOCK FOR PAIN IN MALIGNANT DISEASE.

EXCEPT in trigeminal neuralgia, the blocking of nerves by alcohol has hitherto found little application. More transient blocking by novocaine is useful in many surgical procedures, and its scope has recently been extended by the introduction of paravertebral anæsthesia as a supplementary measure in certain abdominal operations. A wider field for the more permanent method is opened up by its adoption for the relief of pain in suitable cases of incurable malignant disease. Three examples of its use in this way at the Montefiore Hospital, New York, are described by Swetlow and Weingarten.[1] The first was a case of neoplasm of the lung, with pain and extreme hyperæsthesia in the left axilla, and later, over the lower part of the left scapula; any movement whatever aggravated the patient's distress and he found it impossible to lie on his left side. Physical examination revealed two areas of marked hyperalgesia, one involving the skin segment supplied by the second to the fifth dorsal spinal nerves, the other those supplied by the seventh to the eleventh. Three cubic centimetres of a 60 per cent. solution of alcohol were injected paravertebrally into the intercostal nerves supplying the hyperalgesic areas, and the patient obtained great relief, which continued till his death 33 days later. The second case was one of carcinoma of the breast, in which involvement of the pleura had given rise to severe stabbing and burning pain. An area of hyperalgesia extended from the sixth to the twelfth dorsal segments. The corresponding intercostal nerves were injected paravertebrally with 80 per cent. alcohol and complete relief was obtained; when the patient was seen 58 days later there had been no return of pain. The third case was one of carcinoma of the tongue, and the nerve injected was the right inferior maxillary. Swetlow and Weingarten point out the disadvantages of the constant use of morphia in cases of this kind; tolerance is quickly acquired and, because large doses are necessary to relieve pain, the patient often has to be kept in a stupefied state. No such objections attend nerve blockage.

[1] Medical Journal and Record, June 2nd, 1926, p. 728.

## CORONERS' JURISDICTION TO INVESTIGATE FIRES.

THOUGH the Home Office Committee on Coroners reported in 1909 in favour of extending throughout the country the jurisdiction to investigate fires which is at present confined to the City of London, the Government's Coroners (Amendment) Bill, now before Parliament, does not propose to give effect to this recommendation. As a matter of history the coroner's jurisdiction was formerly not restricted to inquiry into cases of death and treasure trove. The statute De Officio Coronatoris (4 Edw. I., stat. 2) contained a list "of what things a coroner shall inquire." The list mentions deaths, woundings, house-breakings, treasure trove, rape, wreck and deodands. Early legal writers, such as the author of the "Mirror of Justices"—an authority said by Maitland to be so full of fables and falsehoods as to be worthless on the subject of criminal law—mentioned also that coroners should inquire into unnatural offences and monstrous births, adding the information that formerly coroners used also to inquire of burnings. In later centuries the great commentators of our common law, such as Coke, Hale, and Comyns, state the coroner's functions in much narrower terms as limited to cases of homicide upon view of the body of the deceased. Curious readers will find the subject discussed at length in R. *v.* Herford (1860, 29 L.J. Q.B. 249). A fire occurred in the shop of one Levy Kreigsfeld, a dealer in indiarubber and mackintosh goods in Manchester. The chief constable had his suspicions and suggested to Mr. William Herford, the Manchester city coroner, that an inquest should be held; but the Court of Queen's Bench intervened and held that the coroner had no fire jurisdiction. Chief Justice Cockburn observed that from 1276 (the date of the statute De Officio Coronatoris) down to some 20 years before R. *v.* Herford was decided, there seemed to have been a uniform abstinence from the exercise of such a jurisdiction. This circumstance, coupled with the fact that the legislature had made no provision for coroners' fees in arson cases, led the court to infer that no such jurisdiction existed. Thus the matter was settled, and the practice of coroners inquiring into fires was abruptly terminated after showing signs of becoming common. As one of the Chief Justice's colleagues pointed out, instances of fire inquiry were found in the City of London. In this as in other respects the City has been allowed an exceptional position, and in 1888 the City of London Fire Inquests Act (50 & 51 Vict., c. xxxviii.) defined and regulated the fire jurisdiction of the City coroner. The preamble to the Act does not claim any immemorial usage, but merely recites that the origin of many fires taking place within the City of London is undiscovered, and that it is desirable that better provision should be made respecting the same. Dr. F. J. Waldo reports that of 186 fire outbreaks which he has personally investigated in the City, 33 were of electrical origin. He advocates a Board of Trade inquiry into cases of this sort. This suggestion may be the answer to the proposal to extend coroners' jurisdiction to fire investigations throughout the whole country. So long as inquests are restricted to discovering the cause of death the medical profession is immediately interested, and the public interest requires that coroners should possess the qualification of medical knowledge. It is otherwise if the office of coroner is to be universally enlarged to deal with subjects which concern the architect, the engineer, and the electrician. Statutory provision has been made for

the departmental investigation of accidents in factories and mines, at sea, or on railways. The Air Ministry can inquire into the cause of aerial disasters, the Home Office into that of explosions, and the Ministry of Transport into traffic accidents within the London traffic area. Similar departmental power to investigate the cause of serious fires might well be provided.

## SYNCOPE IN PAROXYSMAL TACHYCARDIA.

IN the December number of the *Bulletins et Mémoires de la Société Médicale des Hôpitaux de Bucarest* Dr. Iliescu records a case of paroxysmal tachycardia of ventricular origin in which Stokes-Adams attacks accompanied the longer paroxysms. The patient was a woman, aged 60, who had been subject to syncopal attacks for the past 12 months. At the beginning of her illness the paroxysms were associated only with palpitation, but later they were accompanied by dizziness, and finally by loss of consciousness and convulsions. Between the attacks the electrocardiogram showed complete heart-block, the ventricular rate being in the neighbourhood of 32 per minute, while during the attacks it rose to over 200. At the beginning of an attack the ventricular rate rose slowly from 30 to 50 per minute; this was followed by a short period in which isolated ventricular extrasystoles appeared in the record and then paroxysmal ventricular tachycardia supervened. When the attack lasted only a few seconds the radial pulse remained perceptible, but during the more prolonged attacks the pulse entirely disappeared, no heart sounds were audible, and the electrocardiogram exhibited a degree of regularity which led Dr. Iliescu to describe the condition as "ventricular flutter." The fact that the attacks when untreated tended to occur in groups of ten or more made it possible to study the response of the heart to various drugs. On two occasions during a period of slow heart action a single dose of quinidine (0·4 g.) induced an attack which was preceded by a short period of bigeminal heart action. Pilocarpine and adrenalin were given during the attacks on more than one occasion without effect. Atropine stopped the attacks and its daily administration greatly reduced their frequency and rendered them much less severe. It is interesting to note that the effect of both quinidine and atropine in this patient was the opposite of that obtained in a case of ventricular tachycardia reported by R. W. Scott, in which the attacks were induced by atropine and controlled by quinidine. The association of syncopal attacks with tachycardia is a rare condition, but cases have been reported by C. Esmein and E. Donzelot, and by E. Savini in France, by A. D. Hirschfelder and by A. R. Barnes in America, as well as by G. A. Allan in this country. Allan's case, which was reported in a recent number of the *Glasgow Medical Journal*, occurred in a man, aged 53, who had been subject to syncopal attacks for 12 years but in whom there was no evidence of any organic cardiac lesion. The attacks were of short duration, the longest while under observation lasting only 23 seconds, but at times they occurred with great frequency. During the attacks the heart-rate was from 230 to 270 per minute. In Allan's case, as in one reported by Strong and Levine, the spacing of the ventricular complexes was much less regular than that which is found in paroxysms of supraventricular origin, and as in Scott's case quinidine produced a beneficial effect on the condition.

Dr. Wu Lien Teh (G. L. Tuck), Director and Chief Medical Officer of the Manchurian Plague Prevention Service and physician extraordinary to several successive presidents of China, is the first non-Japanese to receive from the Imperial University of Tokio, Japan, its most distinguished diploma, the *higaku-hakushi*. This has been awarded him for a thesis on Pneumonic Plague. Dr. Tuck, as he was familiarly known in England, graduated M.A., M.B. Camb. in 1902 and M.D. in 1905.

Sir John Gilmour has been sworn as Secretary of State for Scotland—the office has not hitherto ranked as a Secretaryship of State—and Major Walter Elliot, M.P., has been appointed Parliamentary Under Secretary of State.

## INDEX TO "THE LANCET," VOL. I., 1926.

THE Index and Title-page to Vol. I., 1926, which was completed with the issue of June 26th, will shortly be published. A copy will be sent gratis to subscribers on receipt of a post-card addressed to the Manager of THE LANCET, 1, Bedford-street, Strand, W.C. 2. Subscribers who have not already indicated their desire to receive Indexes regularly as published should do so now.

# The Services.

### ROYAL NAVAL MEDICAL SERVICE.

Surg. Comdr. A. C. Rusack is placed on the Retd. List at own request.

Surg. Lt.-Comdr. R. J. Inman to be Surg. Comdr.

The following appointments are notified:—Surg. Lts. (D): L. M. Hughes to the *Emperor of India*; L. E. Brown to the *Virid*, for R.N. Barracks, Devonport, on relief; A. T. Brevetor to the *Victory*, for R.N. Infirmary, Portsmouth, temp.

### ROYAL ARMY MEDICAL CORPS.

Temporary appointments at the War Office: Col. H. B. Fawcus, late R.A.M.C., from an Asst. Dir.-Gen., to be Dep. Dir.-Gen.

Lt.-Col. M. H. Babington to be Col., vice Col. N. H. Ross to ret. pay.

Majs. to be Lt.-Cols.: G. A. Kempthorne, vice Lt.-Col. E. P. Sewell (promoted), and H. C. Hildreth, vice Lt.-Col. M. H. Babington (promoted).

#### ARMY RESERVE OF OFFICERS.

Capt. J. A. Andrews resigns his comm. and retains the rank of Capt.

#### TERRITORIAL ARMY.

D. R. McGregor to be Lt.

Supernumerary for service with O.T.C.: 2nd Lt. E. G. Oastler from General List, T.A., to be Lt., supernumerary for service with Medical Unit, Glasgow Univ. Contgt., O.T.C.

#### TERRITORIAL DECORATION.

The King has conferred the Territorial Decoration upon Lt.-Col. Joseph Wilfred Craven and Maj. Charles Douglas.

### ROYAL AIR FORCE.

L. Freeman is granted a short service commission as a Flying Officer for 3 years on the active list.

The undermentioned officers of the Army Dental Corps are granted temporary commissions in the ranks stated on attachment to the R.A.F.: J. G. Worsley (Major), Squadron Leader; T. K. Place (Capt.), H. J. Proctor (Capt.), and H. O. Sumerling (Capt.), Flight Lts.

The undermentioned officers of the Army Dental Corps relinquish their temporary R.A.F. commissions on return to Army duty: Squadron Leader D. Blair (Major); Flight Lts. R. M. King (Capt.), D. H. W. Williamson (Capt.), and A. Williams (Capt.).

Flight Lt. W. G. Weston relinquishes his temporary commission on ceasing to be employed.

### ROYAL ARMY MEDICAL CORPS: OBLIGATIONS OF OFFICERS.

An officer of the R.A.M.C. who undergoes in future the Senior Course of Instruction for Captains prior to promotion to major, or a Specialist Course, will be required to sign an honourable undertaking to continue to serve in the Army after the termination of the course for a minimum period of three years. This will not preclude the Army Council from releasing him from his obligation should the circumstances justify release, but an officer who receives permission to resign his commission before the expiration of the period for which he undertakes to serve, will be required to join the Regular Army Reserve of Officers.

# Modern Technique in Treatment.

*A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.*

## CLXXXIII.

## ECTOPIC AND UNDESCENDED TESTICLE.

THE later stages in the normal descent of the testicle depend upon the development of the gubernaculum which appears about the eighth week of intra-uterine life. The gubernaculum when it first appears contains no muscle-fibres; it is a condensation of mesenchyme and consists of densely packed actively growing cells with large oval nuclei which may be regarded as pre-muscle tissue. The tissue forming the gubernaculum grows rapidly through the inguinal region of the abdominal wall and soon divides into six separate bundles passing to the scrotum, root of penis, pubis, perineum, inguinal ligament, and saphenous opening. These bundles are unequal in size, the largest going to the scrotum. It later becomes muscular by the appearance in it of plain muscle-fibres, and by its shortening causes the testicle preceded by the processus vaginalis to descend from the posterior abdominal wall through the inguinal canal into the scrotum.

### *Forms of Ectopia.*

In cases of undescended testicle the gubernaculum has not acted efficiently and the testicle remains in the inguinal canal, at the external abdominal ring, or in the upper part of the scrotum. In cases of ectopia, the gubernaculum, for some reason unknown, is believed to become separated from the body of the testicle. The testicle, now without a guide, is left to pick out its own path, and naturally chooses the path of least resistance. As it travels inwards from the external abdominal ring, it finds itself in an extensive fascial space between the deep lamina of the superficial fascia of the abdominal wall and the aponeurosis of the external oblique. Having entered this space, the only control to which the testicle is subjected is in the extent of its migration, and this depends solely upon the length of the spermatic cord. A short cord may hold up the testicle immediately the latter enters the space, and the testicle comes finally to rest just internal to, and as a rule slightly above, the external abdominal ring. Given a long cord which will not hamper onward progress the testicle may have many possible destinations. Its general trend, however, will be downwards.

Finally it will occupy either of two positions—the dorsum of the penis or the perineum. In *penile ectopia*, the testicle passes inwards towards the symphysis and comes into relation with the penile root. Passing downwards from this situation, it finally comes to rest beneath the subcutaneous tissues on the dorsum of the penis.

In *perineal ectopia*, the testicle passes downwards over the pubic crest and passes into the perineal division of the fascial space. Here its further progress becomes barred by the attachments of Colles's fascia and the transversus perinei superficialis. It finally comes to rest about one inch in front of the anal margin, to one or other side of the mid-line.

The other forms of ectopia are extremely rare. Perhaps the most common of them is the *crural* type, in which the testicle is found lying in Scarpa's triangle, in the neighbourhood of the saphenous opening. The condition is associated with an abnormally long mesorchium. As the testicle approaches the internal abdominal ring, the long mesorchium fails to exercise its customary control, and instead of the testicle being brought close up to the internal ring it sags downwards to the crural ring.

### *Operative Measures.*

Expectant treatment should only be adopted in young children, as it is only in very few cases after the age of 4 years that the testicle will descend on its own account. Operative treatment is always indicated, since complications frequently accompany, or arise in association with, imperfect migration of the testicle. The commonest of these are hernia, hydrocele, inflammation of the testicle, torsion of the spermatic cord, and malignant disease.

This may be considered under three headings: (1) Orchidopexy, or fixation of the testicle in the scrotum. (2) Orchido-cœlioplasty, or replacement in the abdominal cavity. (3) Orchidectomy or removal.

The first is obviously the most logical procedure for it aims at replacing the testicle in its normal position. Unfortunately, it frequently fails because in many cases the testicle cannot be brought down into the scrotum without division of the spermatic artery. Should this division be made the testicle is dependent upon the artery of the vas alone for its blood-supply—a blood-supply which is quite inefficient for the proper growth and development of the testicle. In any operation the integrity of the essential structures of the cord must be maintained.

Not only should the vas deferens and its blood-vessels be mobilised most carefully along the course of the entire inguinal canal, but the intrapelvic portion of the vas deferens and its companion vessels should also be freed. The firm connective-tissue bands, which often fix the spermatic cord to the pelvic tissue, should be divided with scissors. Although owing to their relative shortness the blood-vessels may interfere with the lowering of the testis to a greater extent than does the vas, they must never be divided if orchidopexy is to be successful. In ectopia testis the same principles apply, and in most cases of ectopia it is possible to bring the testicle down into the scrotum and obtain permanent anchorage.

### *Orchidopexy.*

The following technique is recommended:—

An oblique incision is made over the inguinal canal and the aponeurosis of the external oblique muscle exposed; this in turn is split from the external abdominal ring to well beyond the position of the internal abdominal ring. That part of the gubernaculum which is continuous with the lower border of the processus vaginalis is freed from its attachment to the scrotum and a Spencer-Wells forceps is applied to it in order to facilitate traction on the cord without causing any injury to the testicle. A pouch is prepared for the testicle by pushing the forefinger into the scrotum. The fibres of the cremaster muscle are divided and the sac opened high up near the internal abdominal ring; the testicle is exposed seemingly within the congenital peritoneal sac. Great care should be exercised in separating the sac from the spermatic cord, as the vessels are spread out on its posterior surface as a broad band, and any traumatism to the spermatic vessels in childhood is almost invariably followed by atrophy. The peritoneal sac is dissected up to the internal abdominal ring and transfixed. A tunica vaginalis is formed from the fundus of the sac by a purse-string suture. Care should be taken not to handle the denuded testicle otherwise post-operative swelling may occur. A finger is now passed behind the upper part of the inguinal canal and the internal ring dilated. The vas can be seen leaving the spermatic vessels at the internal ring and thence passes downwards and inwards. As a rule there is little difficulty in obtaining sufficient length to the vas, but to ensure its proper relaxation the fascia of the transversalis abdominis muscle can be split downwards from the internal abdominal ring to the deep epigastric artery.

Division of the deep epigastric vessels or the transposition of the testicle and spermatic cord behind them, as advocated by some surgeons, yields an insignificant increase in the length of the cord, the only structure to benefit by this procedure is the vas, with which there is rarely any difficulty. The peritoneum is lifted up from the posterior abdominal wall by a small retractor and any fibrous bands or adhesions connecting the spermatic vessels to the posterior abdominal wall are divided with scissors. By this means the spermatic cord is sufficiently lengthened to allow the testicle to lie without any tension in the bottom of the scrotum. A needle threaded with silk is passed through the lower part of the gubernaculum which is attached to the testicle and through the scrotum; both ends of this suture are fixed to a Cheyne's testicle frame when the inguinal wound has been closed. The entrance to the scrotum below the pubic spine is closed over the cord with a purse-string suture. The conjoined tendon is then sutured to Poupart's ligament above the vas, and the other layers of the abdominal wall are closed as in a radical cure for hernia.

The patient is kept in bed for a fortnight, and a careful watch is kept upon the ligature to see that it is always tight. It is a good plan to increase the tension slightly every second day by untying the knot and refastening it. Sometimes the constant traction on the ligature causes it to cut its way out about the tenth day: if this does not occur it may be pulled through by traction upon one end.

*Orchido-cœlioplasty.*

The operation for the replacement of the testicle in the abdomen is very similar to that of orchidopexy except that instead of bringing the testicle down into the scrotum it is placed in a bed made for it in the extraperitoneal tissue and retained there by catgut sutures. The hernial sac is dealt with as in a radical cure for hernia.

*Orchidectomy.*

When the testicle is to be removed the inguinal canal is exposed by an oblique incision similar to that used in orchidopexy. The testicle within the processus vaginalis is freed up to the internal abdominal ring. The spermatic cord is ligatured at the abdominal ring and the testicle removed. Two or three catgut sutures are passed from the deep aspect of Poupart's ligament to the conjoined tendon and tied, thus obliterating the inguinal canal. The external oblique is then united by a continuous catgut suture, and the skin closed by a continuous silkworm gut suture.

*The End-results of Treatment.*

As regards function, patients with bilateral undescended testicles are found to be sterile. On microscopical examination of over 50 undescended testicles removed by different surgeons I have not been able to find any normal genital cells or spermatozoa in any of the specimens examined. The operation itself often fails in anchoring the testicle in the scrotum, for in cases examined several years after operation the testicle is often found high up in the scrotum or at the external abdominal ring.

It may be said: Why should an operation be performed at all? First, complications may arise in connexion with an undescended testicle; these have already been mentioned. Secondly, there are definite and important social reasons for operation. The position could not be put better than in the words of a recent leading article in THE LANCET (1926, i., 353): "The genital organs carry such an emotional charge that, even though they remain concealed in ordinary circumstances, the reactions of the individual to any loss or defect are often greater than when he bears a loss literally upon his face. Moreover, in the case of children, we must bear in mind that mental development in the psycho-sexual sphere is so powerful in determining the whole behaviour of the individual that, apart from endocrine influence, the physical state of the genitalia as they appear to the person concerned must play a part, though its extent may be debatable, in fashioning his reaction modes and character traits."

*Conclusion.*

In conclusion, it may be said that in those cases where there is an imperfectly descended testicle on one side and a well-developed fully descended testicle on the other, the partly descended testicle should be removed, unless it can be brought down into the scrotum without any tension or division of any of the constituents of the spermatic cord. In bilateral cases it is advisable to take means to preserve the internal secretion on both sides and not to sacrifice the gland. An attempt should be made to bring one testicle into the scrotum, in order that some chance of fertility may be afforded the patient, and to return the other testicle to the abdomen.

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# Special Articles.

## MEDICINE AND THE LAW.

*Mr. Harnett's Appeal.*

THE judgment of Mr. Justice Horridge dismissing Mr. Harnett's action against Dr. Holdrich Fisher (for damages for negligence in certifying him to be a lunatic in 1912) has been upheld by the Court of Appeal. The point was a short one. Mr. Harnett escaped from the asylum at Croydon in 1921, and commenced his action by writ at the end of May, 1922. Two sections of the Statute of Limitations were material. Section 3 enacts that actions such as Mr. Harnett's must be begun within six years after the cause of action arises; Section 7 enacts that this time-limit shall not apply if the plaintiff is *non compos mentis*. It was of the essence of Mr. Harnett's action that he was not insane in 1912 when his cause of action arose; a jury found in his favour on this point. But if he was sane in 1912, he could not simultaneously be *non compos mentis* so as to evade the Statute of Limitations. The Master of the Rolls observed that he felt compelled to say that great hardship might be occasioned to a defendant if a cause of action should survive so long as Mr. Harnett's against Dr. Fisher. It was, indeed, to avoid that hardship that the Statute was passed. The appeal, however, though dismissed, was dismissed without costs, inasmuch as the appellant had obtained the verdict of the jury on the issue of his sanity and had been awarded £500 damages. Mr. Harnett, of course, lost the benefit of that verdict and those damages when Mr. Justice Horridge dismissed his claim; but they remained an element in the case which won him the sympathy of the Court of Appeal on the question of costs.

*Irresistible Impulse.*

The Court of Criminal Appeal on July 12th refused to accept the principle that irresistible impulse may be a good defence in criminal trials. The appeal was that of Joseph Edward Flavell, convicted at Worcester Assizes of the murder of his step-brother. Flavell was 24 years of age, but was described as having the intelligence of a boy of 14 or 15. His father died at 31 from Bright's disease and epilepsy; no fewer than eight of the appellant's blood relations had either died in, or been confined in, lunatic asylums. Flavell had got up in the night, put on his best clothes, gone downstairs, procured a wood-chopper and killed his step-brother as he lay in bed with two blows severe enough to cause instantaneous death. He was convicted of murder, and his appeal failed, though the Home Office has since commuted his sentence. Sir Edward Marshall-Hall, for the defence, recalled the recommendation made in 1923 by Lord Justice Atkin's Committee[1] to the following effect: "It should be recognised that a person charged criminally with an offence is irresponsible for his act when the act is committed under an impulse which the prisoner was by mental disease in substance deprived of any power to resist." The Committee added that it might require legislation to bring this rule into effect, but, as Sir Edward Marshall-Hall observed, Parliament has done nothing, and now the judges have once more refused to intervene. The Court of Criminal Appeal gave its usual answer that the judge had summed up fairly at the trial, and the jury had found a verdict supported by evidence, and that the further disposal of the accused man rested with the Home Office. In fact, we are back where we were before the case of Ronald True focused public attention upon the discrepancies between legal and medical theories of criminal responsibility, and before the Lord Chancellor set up the Atkin Committee.

[1] THE LANCET, Dec. 8th, 1923, p. 1262.

Sir Edward Marshall-Hall was urging the arguments six years ago in R. *v.* Holt (15 Cr. A.R., p. 10); he contended then that it was the duty of the lawyer to keep pace with the scientist. Indeed, the legal view was nearer to the medical view then than now, for in Holt's case, as Lord Reading, C.J., has pointed out, the trial judge did at least leave the question of uncontrollable impulse to the jury, though the jury's verdict negatived the defence founded thereon. The later cases seem to show a stiffening of the legal view. In 1921, for example, in R. *v.* Quarmby (15 Cr. A.R., p. 163) counsel for the defence argued that the subconscious mind of a person afflicted with delusions was a factor to be considered in connexion with acts committed by one whose unrestrained passions resulted in crime. "The King's Bench determines the existing law," said Darling, J., on that occasion, "not what the law might be if amended by the legislature." "Foreign and colonial codes," added Sankey, J., "admit the defence of irresistible impulse; English law does not." In the following year Sir H. Curtis Bennett plied Mr. Justice McCardie with arguments on "impulsive insanity" in the case of Ronald True and addressed the Court of Criminal Appeal to the same effect, but without securing an acquittal. The latter court showed itself even more hostile to the theory of uncontrollable impulse in R. *v.* Kopsch last year (19 Cr. A.R., p. 50). Kopsch strangled a Mrs. Thornton in Ken Wood with his necktie; they had been lovers, and his defence was that she asked him to strangle her and that he acted under an impulse which he could not control. Lord Hewart, C.J., was severe upon the defence. "The court," he said, "has to-day had a repetition of an argument which from time to time is heard here, with an ingredient added that is not common—namely, that, according to the experience of counsel for the defence, His Majesty's judges are continually summing up to juries on the question of insanity in the way for which he has contended. That statement is surprising. No such summing up is known to this court. The law with regard to criminal insanity is that every man is presumed to be sane and to possess a sufficient degree of reason to be responsible for his crimes until the contrary is proved to the satisfaction of the jury. To establish a defence on the ground of insanity, it must be clearly proved that, at the time of the committing of the act, the party accused was labouring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong." Having thus laid down the existing law, the Lord Chief Justice criticised the arguments for the defence as having drifted round to the contention that the law ought to become what he stigmatised as the "fantastic theory of uncontrollable impulse, which, if it were to become part of our criminal law, would be merely subversive." It is not yet part of the criminal law, added Lord Hewart, and he hoped the day was far distant when it would be made so.

With profound respect to the learned Lord Chief Justice, one may ask whether he has not overstated the position. Can a doctrine be unknown when Mr. Justice Greer expounded it to the jury in Holt's case? Can it be fantastic and subversive when so staid and cautious a body as the Atkin Committee gave it support? Lord Justice Atkin's colleagues included official lawyers like the present Master of the Rolls (then Attorney-General) and Sir Leslie Scott (then Solicitor-General), authorities deeply versed in criminal prosecutions like Sir Herbert Stephen, Sir Richard Muir, and Sir Archibald Bodkin, and Home Office representatives like Sir Edward Troup and Sir Ernley Blackwell. These gentlemen stated in their report that they were satisfied that cases of mental disorder did exist where the impulse to do a criminal act recurs with increasing force until it is, in fact, uncontrollable. They found that cases were not uncommon in which mothers, normally devoted to their children, cut their children's throats or otherwise took their lives. In such cases, they said, the accused knows the nature of his act and knows that it is wrong, and the McNaghten formula is not logically sufficient. "We think," said the Committee, "that it would be right that such cases should be brought expressly within the law by decision or statute. We think that it should be made clear that the law does recognise irresponsibility on the ground of insanity where the act was committed under an impulse which the prisoner was, by mental disease, in substance deprived of any power to resist." The Committee gave some grounds for thinking that the existing law was already as thus stated. "No doubt some judges have charged juries to that effect; on the other hand, there seem to be definite decisions of the Court of Criminal Appeal the other way. It seems to us that, if this legal doubt should continue, it would be advisable to make the law clear by an express statutory provision. We have no doubt that, if this matter were settled, most of the criticisms from the medical point of view would disappear."

The Atkin Committee was remarkably conservative and cautious. It made this modest contribution to settle the controversy between law and medicine, but the recommendation put forward with such high authority has been ignored. The suggested rule has been confirmed neither by statute nor by decision. The Court of Criminal Appeal faces the arguments of the Committee with a blank negative. Have the Lord Chancellor and the Home Office thrown the Atkin Committee over?

### *The Mystery of the Fishmongers.*

Two fish salesmen were fined £50 each with £5 5*s.* costs at the Mansion House some days ago for selling putrid fish at Billingsgate. One had sold two boxes containing 24 hake, the other had sold 57 lobsters unfit for human consumption. The defendants attributed the sale to the slackness of their servants, who let the fish pass without sufficient examination. More recently three other fish salesmen of Billingsgate Market were each fined £25 with £3 3*s.* costs for selling a box containing 27 codfish which were unfit for human food, the charge being made under Section 47 (2) of the Public Health (London) Act of 1891. On both occasions the prosecutions were undertaken by the Fishmongers' Company under a charter of 1604. At that date King James I. reincorporated the "wardens and commonalty of the Mystery of Fishmongers in the City of London," and gave them the usual powers to make laws for the good government of the mystery. The company received rights of survey, search, government, and correction of all persons whatsoever selling, having, or possessing any fish. Power was given to enter premises and to view, search, and survey whether the fish be wholesome for man's body and fit to be sold or no, and, if found unwholesome, corrupt, or unfit to be sold, to seize and dispose of it. It was under these powers that the Fishmongers' Company acted in the recent prosecution. The status and capacities of this ancient corporation were expressly recognised in the Salmon and Freshwater Fisheries Act of 1924 (Sections 34 (2), (4), and 78 (*d*)). It is in keeping with immemorial traditions of municipal life in this country that each trade should be organised to supervise its own members. The Mystery of the Fishmongers has always attached great importance to its duties of supervising fish supplies. Our city companies amply justify their existence by undertaking such work in the interests of the community.

### *Prison Clothing.*

An unusual action was lately heard in the Bedford county court when a man who had been placed in Bedford prison on remand claimed £100 damages against the late governor of the prison for removal of his clothing. The judge awarded £5 5*s.* damages with costs and spoke strongly of the repulsive result of compelling a man of decent upbringing to wear underclothes previously worn by persons who were often verminous and sometimes diseased. It was not apparently suggested that the plaintiff in this case

had been compelled to put on verminous or infected clothing; otherwise the damages would doubtless have been heavier. The Prisons Rules for England, like the corresponding code more recently issued for Scotland, naturally direct that every convicted prisoner must be provided with a prison dress and shall be required to wear it. But a person remanded to a prison is very far from being a convicted prisoner. According to the English rules a prisoner awaiting trial may wear prison dress if he desires it; apparently he cannot be compelled to do so unless his own clothes are insufficient or unfit for use or are necessary to be preserved for the purposes of justice, or except during a period when his own clothes are being disinfected to prevent the introduction or spread of infectious disease. The county court judge said he was satisfied that the late governor of the prison, who was being sued, was responsible for what had occurred; he added that his judgment would emphasise his strong opinion that there was persistent infraction of one of the most important rules in favour of a prisoner. The incident gives rise to wonder whether the prison visitors pay attention to this point, and whether the Prisons Rules are sufficiently explicit or whether the fault lies in their non-observance.

## LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

### PRESENTATION TO DR. ANDREW BALFOUR.

THE members of the teaching staff of the London School of Hygiene and Tropical Medicine assembled in the library on Friday last, July 23rd, in order to present the Director, Dr. Andrew Balfour, with a picture by Mr. A. O. Lamplough as a token of esteem, and in recognition of his great services to the School. The presentation was made by Prof. R. T. Hewlett, who said:—

Dr. Andrew Balfour,—We are gathered here to-day to make you a little presentation as a token of goodwill and esteem in which you are held not only by your colleagues of this School, but by many other outside friends. If you will look at the list of those who have contributed to this presentation you will find that it includes a representative of the Rockefeller Foundation, past and present members of the teaching staff of the School, members of the staff of the Tropical Diseases Hospital, representatives of the Seamen's Hospital Society, members of the Bureau of Hygiene and Tropical Diseases, and of your administrative staff (and in this connexion Mr. Harris writes to say how sorry he is to be unable to be present to-day and how proud he is to serve under you). Many years ago—more years probably than either you or I care to reckon—I had the honour and pleasure of being present at a dinner to bid you farewell on your approaching departure for Khartoum.

I little thought then—a score of years or more ago—that I should in the future be the unworthy mouthpiece of those who desire in a sense to welcome you back again in the important and honourable post of Director of the London School of Hygiene and Tropical Medicine. I need hardly say how glad I am to do this and appreciate the call, though I am bound to say I suspect it is a somewhat dubious compliment to myself based on length of service and grey hairs rather than on actual merit!

We have now reached what may, perhaps, be regarded as the third stage in the career of the School of Hygiene. The first stage was the noble gift by the Rockefeller trustees of funds for the foundation of the School. The second stage was the altogether admirable appointment of yourself as Director of the School, and the third stage was initiated the other day by the laying of the foundation-stone of the permanent home of the School.

Some of us of the old London School of Tropical Medicine, so successful in the past under the ægis of the Seamen's Hospital Society, to whom a warm tribute ought to be paid for their wisdom and foresight in undertaking so desirable, though at the same time so great, a venture, some of us of the old Tropical School may feel some regret at its disappearance as a separate entity, for believe me under the inspiration and leadership of Sir Patrick Manson we throve wonderfully and were a very happy family. But all of us, I think, agree that the incorporation of the Tropical School in the new School of Hygiene was a right and proper step, and we in particular, members of the old Tropical School, welcome your appointment as Director because we believe that the great Mansonian tradition will be worthily maintained in your hands as regards the tropical side of the School's activities.

As regards other activities of the School, in your hands, too, we may rest assured that they will be in equally safe keeping. The physical side of health training certainly will, for have you not won, if not spurs, at least many hacks and bruises on university and international football fields? You have experience of public health administration, you have travelled widely and have a broad outlook on health problems, you are a research worker and know the importance of a live school combining teaching with research. When I look at the list of decorations and degrees you have acquired, of the prizes you have won, of the appointments you have held, of the campaigns in which you have taken part, and of the committees upon which you have served, I begin to ask myself: Has Scotland produced only *one* Admirable Crichton?

Moreover, by your silver speech and ready pen you do much for the School. Was not the last named (your ready pen) partially trained in the realm of romantic fiction? We may be sure you will not be "Cashiered," may we hope that your course may be a smooth one, not determined "By Stroke of Sword" nor recourse "To Arms," and that in your present post you have in some degree entered into "The Golden Kingdom."

This little gift which we have for you I beg you to accept, firstly, as a welcome (somewhat belated perhaps) to the School; secondly, as an appreciation of all you have done for the organisation of the School activities and of the inauguration of its permanent home; and thirdly, as a token of cordial esteem and goodwill from colleagues and other friends. It may also serve to remind you of the time you have spent in tropical climes in the service of humanity and of your country.

Finally, it is a pleasant supplement to the presentation to yourself to ask MRS. Balfour, your closest colleague, kindly to accept this rose-bowl as a memento of this occasion.

Dr. Andrew Balfour, in reply, expressed his thanks at the welcome given him by the staff of the School in the arduous task of reorganisation of its activities, and expressed his hopes for the future prosperity and success of the School of Hygiene and Tropical Medicine based upon the loyalty of the present staff.

The presentation picture was one of the artist's well-known Eastern effects, representing a Sudanese on his camel, and recalling Dr. Balfour's distinguished services in the Sudan and his activities as advisor to the Forces in Central Africa during the war.

## NOTES FROM INDIA.

(BY OUR OWN CORRESPONDENTS.)

### *The Supply of Quinine.*

THE Madras Government Cinchona Department has begun new plantations in the Anamalais Hills, where the Government possesses fully 20,000 acres suitable for growing cinchona. More than 50 acres were planted before the present monsoon, and it is hoped that in a very short time the bark available from these and other sources will make India independent of foreign supplies. During the year 1924–25, 280,000 lb. of bark were harvested from Government plantations, and the Madras factory produced over 23,000 lb. of quinine sulphate, besides 362 lb. of quinine bihydrochloride and a smaller amount of bisulphate. The output of cinchona febrifuge was 1143 lb. and its popularity is evidently increasing. An official test made in the Madras hospitals two years ago showed that the febrifuge has great potentialities in the treatment of benign tertian infections, though it still remains to be seen whether it is effective in preventing the relapses which are the real problem in malaria. Further work on the periodides of quinine and quinidine indicate that experiments with these salts would be well worth while, and supplies are offered for research purposes.

### *Medical Education.*

In different parts of India there are now 256 women studying for medical degrees, of whom 198 are Indians. At the Lady Hardinge Medical College at Delhi the number of students is at present 106; they are drawn from 14 different Provinces and States, and represent many different nationalities and religious beliefs.

The Government has given nearly a lakh of rupees as a non-recurring grant to meet the cost of equipment, and has increased its annual grant from Rs.200,000 to Rs.311,000, so that the financial difficulties which have hindered the work of the college during the last four years are now at an end. The hospital attached has 200 beds and the educational facilities are adequate.

From the Madras Presidency it is reported that the medical schools have in recent years shown a decline both in strength and admissions, in spite of the fact that an additional school—the Lady Willingdon Medical School for Women—has been established. The decrease in applications for admission is partly attributed to the abolition of the stipendiary system and the small chances of Government employment now open to candidates passing out of the schools.

The general fear of unsatisfactory employment was shown at a conference of the All-India Medical Licentiates' Association held at Lahore last May, when there was evidence of a demand on the part of the licentiates that their present curriculum of four years should be extended to five years in the hope that the extension would assimilate their status to that of university graduates. This solution, however, might not have the desired effect. Colonel Chambers, Professor of Medicine at the Lahore Medical College, who presided over the conference, said that the extension of the medical school course by one year would make the licentiate's training more costly without necessarily improving his prospects, and that if the demand were granted it might lead to the abolition of the licentiates. Already the supply of graduates was greatly in excess of the existing demand, with the result that graduates were prepared to work in place of sub-assistant surgeons in rural dispensaries.

Five hundred students at the National Medical College at Calcutta recently went on strike in order to compel the authorities to apply for affiliation to the Medical Board. As things stand at present, students who have passed out of the Calcutta National Medical College are liable to prosecution under the Bogus Degrees Medical Act, since the institution is not recognised by Government.

*Midwives Registration Act.*

The Madras Legislative Council has passed a draft Bill for the registration of nurses and midwives in the Presidency. It is proposed to register all qualified and trained nurses and midwives, and in addition the Government has accepted the scheme for the training of *dhais*, or barber-midwives, and for their registration. The *dhais* will be given systematic training at district headquarter, municipal, and taluk headquarter hospitals approved by the surgeon-general; they will receive a stipend of Rs.7.8 a month while being trained, and after not less than six months' training they will be examined by the district medical officers and matrons at the district headquarters. Those who are certified will be entitled to practise in rural areas, but they will not be eligible for employment in Government, local fund, or municipal service, and they will be re-examined by district medical officers once every two years in order to ensure that they are still efficient. These barber-midwives will be encouraged to call in outside aid or to take the cases to the hospitals whenever necessary, and for every such case they are to be granted a reward of one rupee by the local body concerned.

*Internal Opium Policy.*

The Government of India has published a resolution stating that its policy, based on the finding of the Royal Commission of 1893, has been and is one of non-interference with the moderate use of raw opium. On the other hand, over-indulgence must, as far as possible, be suppressed, and though much has been done to reduce the consumption of opium as a whole, there are still black spots on the map of India which the Government is anxious to remove. In regard to the administration of opium to children, the Government accepts the view that education and child welfare propaganda are the only expedients likely to give satisfactory results. In conclusion, the resolution states that prohibition of the use of opium for non-medical purposes would be impracticable, but efforts are to be made to check smuggling, and special attention will be devoted to areas where consumption is unduly high.

*St. John Ambulance Association.*

Presenting the annual report of the St. John Ambulance Association on June 24th at Simla, Sir William Birdwood said that railways, police, educational institutions, gaols, mines, and Indian States were taking their share in the movement; amongst the 10,340 persons who had passed the course during the year were 1880 railway employees. A notable feature of the year was the advance of the work in gaols. For the first time in the history of the Association a large number of teams, consisting of convicts and warders and boys from the reformatory schools, had taken part in the All-India Ambulance Competition.

Medical inspectors of schools are being appointed to the important towns in the United Provinces.

The total number of patients treated at the Punjab Mental Hospital, Lahore, during 1925 was 1154 and the average daily strength was 864. The death-rate was 14·2 per cent. of the daily average population, more than half the deaths being due to dysentery and diarrhœa.

The Bengal Government has decided to devote 2 lakhs of rupees (£14,000) to an intensive campaign against kala-azar. Several hundred treatment centres will be opened throughout the province under the control of the district boards.

Lieut.-Colonel K. V. Kukday, inspector-general of civil hospitals, Central Provinces, opened a new hostel at Nagpur on July 1st.

The ninth annual report of the King Edward VII. Pasteur Institute and Medical Research Institute of Shillong states that there were only 8 deaths from hydrophobia in 980 cases of dog bite, and 3 deaths in 165 cases of jackal bite.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

*Overcrowding of the Medical Profession.*

OVERCROWDING of the profession has led the Hartmann-Bund, the great medical union, to take energetic steps. According to the law a medical man may settle where he likes; but, as a matter of fact, with a few exceptions, he cannot earn a living without being admitted to club practice. The indiscriminate admission to club practice, known as the free choice system, and described in my letters on several occasions, has given satisfaction to the club members but not to the profession in general. Owing to the great number of club doctors, the share of the club fees which individual medical men receive grows smaller and smaller. The few existing restrictions—notably that in certain great towns a medical man before being admitted to club practice must have resided in the town for at least three years—have little effect in diminishing the number of club doctors. The general assembly of the Hartmann-Bund, which has lately been held in Eisenach, has now decided that medical men over 70 years of age who voluntarily retire from club practice shall be entitled to an annuity from the Bund of at least 1200 to 3000 marks (£60–£150). In certain circumstances, also, medical men over 60 are to have the same privilege, provided that necessary means are at the disposal of the Bund. The funds will be collected from different sources, and the first step will be to raise the subscription by 1 mark a month. As the Bund has 39,000 members, this should mean an increased income of 770,000 marks (£23,500) a year. The local branches will be authorised to raise special contributions, and the admission fee will be increased.

It has further been decided to approach the Government with a view to their taking steps by which the number of club doctors may be still more reduced. Government medical officers should, it is suggested, be forbidden club practice, and those only partly engaged in Government work should be made whole-time officers, and therefore obliged to give up club practice. These measures, however, are likely to be inadequate, because the number of medical men not yet admitted to club practice—such as assistants in hospitals and medical institutions—and the number of students in the last term is so great that the needs of club practice are covered for at least ten years. The Hartmann-Bund, together with the clubs, will, therefore, suggest to the Government that it should put an embargo on club practice for ten years. They propose that a law shall be passed that medical students who have not finished their first term by April 1st, 1927, cannot be admitted to club practice. (Sons and daughters of medical men are to be exempt from this law.) If the Government will not agree to the proposal the Hartmann-Bund, either alone or with the clubs, will publish notices on a large scale warning students against continuing the study of medicine and advising school-boys against taking it up.

*The German Health Office.*

Fifty years have elapsed since the Imperial Health Office was established, and its jubilee has just been celebrated with great solemnity. When Germany became an Empire the care of public health was entrusted to the individual States which form the confederation. The difficulty of dealing with epidemics and other problems soon made it necessary, however, for the Central Government to set up an advisory board. In the Act establishing the Health Office in 1876 its object was described as follows: To advise the Imperial Chancellor on the control of measures taken by individual States for the care of public health and in combating epidemics; to prepare Government Bills dealing with these questions; to give advice on request to the authorities of the individual States; to edit the German Pharmacopœia, and to follow the development of hygiene in foreign countries. As the celebrated savants, Virchow and Pettenkofer, declined appointment as president of the new Office, an army medical officer, Dr. Struck, was chosen. The only members besides the president were Finkelnburg, professor of hygiene at Berlin University, and Roloff, of the Veterinary College; three clerks completed the small staff. But as early as 1878 a laboratory of hygiene under Wolfhügel and a chemical laboratory under Sell were added to the equipment. Bacteriology was then beginning to play an important part in medicine, and in 1880 Dr. Koch, medical officer of health in a small provincial town, was appointed bacteriologist to the Office, because he was known to be one of the few men who at that time had some knowledge of bacteriology. His name was soon to become famous all over the world, for in 1882, in the laboratory of the Office, he discovered the tubercle bacillus. Working there, also, with Koch's methods, his assistants, Löffler and Schütz, discovered the anthrax bacillus; Eberth and Koch the bacillus of enteric fever; Löffler the diphtheria bacillus, and Koch the cholera bacillus. Later, in the same laboratory, Schaudinn discovered the *Spirochæta pallida*.

The Office is now divided into several departments: a chemical department, which deals with the study of drugs and poisons and with the German Pharmacopœia; a medical department, which deals with medical legislation, with the combat against infectious diseases and epidemics, with industrial hygiene, and with medical statistics; a bacteriological department, and a veterinary department. The library of the former Army Medical College—which, with its 100,000 volumes, is the greatest medical library of the Continent—now belongs to the Office. The staff of the Office includes the president, four heads of departments, and 55 scientific members besides the clerical staff. There is, moreover, a German Health Council connected with the Office, consisting of 136 members from every part of Germany, who meet to discuss important questions either in full council or in special committees.

*An Epidemic of Meat Poisoning.*

In Kalkberge, near Berlin, an epidemic of meat poisoning lately broke out. Eighty people became ill with severe vomiting and profuse diarrhœa after eating scraped raw meat bought from a particular butcher in the locality. In households where the meat had been cooked nobody was affected. It was found on inquiry that the butcher had bought a joint in the central cattle market in Berlin, and that the meat had been examined and passed as healthy. Bacteriological examination of the meat, however, revealed infection by Gaertner's bacillus, which belongs to the paratyphoid group; its presence does not influence the appearance of meat, and so the butcher had not discovered that there was anything wrong. Seeing that the meat proved healthy in the cattle market, it is possible that the infection took place during its transport. It was carried by a butcher's mate in a linen sack from the market to the shop, and it seems probable that either the sack contained bacilli or the butcher's mate was a carrier of bacilli. In other localities where pieces of the same joint were sold no case of illness has appeared. Two of the patients have died; the others have recovered. The butcher's shop, which was temporarily closed by the district medical officer of health until it had been thoroughly disinfected, has been opened again, as the butcher obviously could not be made responsible for the epidemic.

*Medical Cinematography.*

A cinematographic institute for medical purposes has lately been opened in connexion with the Charité Hospital under the auspices of the medical faculty. It will be directed by Prof. von Rothe, the well-known surgeon. The apparatus used is carefully sterilised and the camera is fitted up so as to take photographs from the ceiling. In this way the various steps of an operation may be made visible, whereas in the ordinary way the patient is hidden from the spectators by the surgeon and his assistants. Other rooms of the institute are to be used for filming experiments on animals, epileptic and other fits, the movement of patients, and various pathological conditions.

## IRELAND.

(FROM OUR OWN CORRESPONDENT.)

*Tuberculosis Officers' Association: Annual Meeting.*

THE annual meeting of the Tuberculosis Officers' Association was held recently in Dublin, and an interesting discussion took place on the problems of tuberculosis in Ireland. Dr. M. Quinlan (Kerry) stated that he knew of several healthy families who were infected, and decimated, by infection introduced from abroad, particularly from America and England, and he suggested that such cases should be refused entry at the ports, or, at the very least, that the Port Medical Authority, if or when established, should report such cases immediately to the responsible authority in the area in which these people proposed to reside. Persons emigrating to the United States who contracted tuberculosis within three years of their immigration were deported, and even in the case of American citizens, they were, when all treatment failed, advised "to return to their native air," thereby carrying infection to Ireland. Dr. O'Beirne agreed, and added that when some years ago he was surgeon on a transatlantic liner emigrants were examined before they came on board. When they came on board they were again examined by him, and again in the course of the voyage. Before they were permitted to land they were, outside the harbour,

examined by two doctors, and were again examined on landing. The picture on the return journey was remarkably different. No examination of passengers was made before embarking, no routine examination on board, and none on landing. He suggested that passengers on liners bound for Ireland should be examined en route by the doctor on board, and infectious cases reported by him to the port authorities at the port of disembarkation. Dr. T. P. O'Reilly (Cavan) pointed out that in Ireland during the decade 1901–1910 the average annual mortality from all forms of tuberculosis was 2·63 per 1000 of the population. In 1923 the rate had fallen in the Saorstat to almost half—to 1·41 per 1000. In 1924 the rate rose to 1·45, and in 1925 to 1·48. Dr. B. O'Beirne (Galway) believed that the isolation of advanced cases was far more important than the treatment of the individual, comparatively; and that too much attention was being paid to the diagnosis of "early" cases, and, comparatively, too little to stopping the spread of infection. Dr. T. Reynolds (Leitrim) gave an outline of a scheme of orthopædics of English origin, and suggested the institution of a central orthopædic hospital near Dublin, staffed by whole-time orthopædic surgeons.

*Committee on Milk Supply.*

The first meeting of this Committee was held on July 14th in the offices of the Department of Local Government and Public Health. The members are Mr. R. Wilson, T.D. (Chairman), Dr. T. Hennessey, T.D., Mr. P. K. Hogan, T.D., Dr. E. F. Stephenson, Dr. M. J. Russell, Mr. P. F. Dolan, M.R.C.V.S., Mr. J. Johnston, Mr. P. O'Connor, Mr. L. S. Smith, and Mr. E. P. McCarron, Secretary to the Department of Local Government and Public Health. It was decided that copies of the regulations and other available literature dealing with the cleanliness and wholesomeness of the milk supply should be furnished to each member of the Committee, that evidence should at the outset be invited from the Dublin Corporation, organisations connected with the Dublin milk supply, Irish Agricultural Organisation Society, Irish Farmers' Union, Creamery Managers' Association, and inspectors of the Local Government Department, and that a summary of transactions at each meeting should be circulated for publication. It was arranged to hold the next meeting after the recess on a date to be fixed by the chairman. The Committee will be prepared to hear any person who notifies his readiness to give evidence and submits a précis to the Secretary, Committee on Milk Supply Department of Local Government and Public Health, Upper Merrion-street, Dublin.

*University of Dublin: Trinity College.*

A three weeks' post-graduate course has been arranged for Sept. 13th to Oct. 2nd. The course will be conducted as in former years and will consist of clinical meetings at hospitals in the morning and laboratory classes in the medical school in the afternoon. Arrangements have been made for a limited number of members of the class to reside in College rooms. A prospectus, giving details of the course and cost, may be obtained on application to the Honorary Secretary, School of Physic, Trinity College, Dublin.

HOSPITALS AND MOTOR ACCIDENTS.—At an inquest last week the house surgeon of Bedford Hospital stated that one bed in three in that institution was occupied by the victim of a motor accident.

THE LONDON HOSPITAL.—The annual report records that the death-rate in 1925 was the lowest on record—4·58 per cent. The decline of the rate in recent years is attributed to increased skill in the diagnosis of disease in its early stages and to the admission of a larger proportion of cases for preventive treatment. The total number of beds in use was 849, but 101 were still closed. The cost of each patient was £11 7*s.* 7*d.*, and the average length of stay 14 days. The income for general purposes was £240,000 and the expenditure £269,000.

# Public Health Services.

## REPORTS OF MEDICAL OFFICERS OF HEALTH.

THE following are statistics for 1925 from districts whose health reports are reviewed below:—

| Name of district. | Estimated mid-year population (R.-G.). | Birth-rate. | Death-rates per 1000 of the population. | | | | | Death-rates per 1000 births. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | All causes. | Tuberculosis. | Cancer. | Resp. diseases with influenza. | Heart disease. | Infant mortality. | Maternal mort. from childbirth. |
| Leicester C. .. | 242,100 | 17·3 | 12·9 | 1·50 | 1·31 | 2·4 | 0·9 | 88 | 4·0 |
| Walsall C.B. .. | 102,300 | 22·1 | 13·6 | 1·21 | 0·97 | 3·4 | 1·1 | 115 | 6·2 |
| Halifax C.B. .. | 97,860 | 14·5 | 16·9 | 1·20 | 1·71 | 3·3 | 1·9 | 93 | 5·6 |
| West Bromwich C.B. .. .. | 79,490 | 22·9 | 11·9 | 0·90 | 1·17 | 3·2 | 0·7 | 99 | 4·4 |
| Llanelly B. .. | 39,090 | 20·3 | 11·6 | 1·02 | 1·07 | 2·1 | 1·3 | 87 | 1·2 |
| Bilston U.D. .. | 30,240 | 26·0 | 16·4 | 0·92 | 1·22 | 5·0 | 1·0 | 117 | 3·8 |

C. = City. C.B. = County borough. B. = Borough. U.D. = Urban district.

*Leicester.*

Dr. Killick Millard reports an epidemic of small-pox of the mild type. There were 72 cases and no deaths. It is now 21 years since the last death from small-pox occurred in Leicester. For 40 years Leicester has been preventing small-pox without resort to compulsory infant vaccination. There was practically no increase of infant vaccination caused by the epidemic; the total vaccinations for 1925 were 283 and the births 4197. Enteric fever has almost disappeared. There were four cases notified and one death. There were 26 known cases of encephalitis lethargica, of which 10 ended fatally. The number of deaths from cancer (318) was the highest on record.

Substantial progress has been made by the corporation in the building of artisans' dwellings, but the need for houses is very acute. The most important building scheme is at Aylestone Park, a site of 206 acres, on which it is proposed to erect 1812 houses—1000 of concrete and the remainder of brick. At the end of 1925, 194 had been erected and a much larger number begun. Another great housing scheme is on the Braunstone estate (1064 acres), purchased by the corporation for £115,000. Here building operations will begin during 1926. The corporation has made a contract for 1500 concrete houses, subject to optional breaks after the completion of each 500. Two experimental steel houses have been erected by the housing committee and are quite unobjectionable from the point of view of health. In spite of the arguments in favour of them—such as the ease of mass production, quick erection, and help for the depressed engineering trade—the committee, after a careful consideration of cost, durability, and upkeep, did not feel able to recommend the erection of this type of house. On one of the estates the rents, excluding rates, vary from 7*s.* to 8*s.* 9*d.* for non-parlour houses, and from 9*s.* 6*d.* to 13*s.* for parlour houses. On another estate the rates are 8*s.* 6*d.* for the non-parlour type and 10*s.* for the parlour type.

The time-limit for black smoke has been reduced from five minutes in the hour to two minutes in the half hour. The limit adopted in Sheffield is two minutes for the hour. Dr. Millard refers to the help to be expected when the new Smoke Bill becomes law. The pollution from domestic smoke, however, will still remain, and he thinks that gas committees should offer coke for domestic use on specially favourable terms. The clean milk campaign makes progress, and measures are being taken to check the sale of

dirty milk. The report includes photographs of pieces of muslin which have been used for the straining of such milk. In one case samples were taken from five churns on delivery, and the outside farmer was fined £10 on each sample, or £50 in all. Dr. Millard points out that the public may be deceived when they buy bottled milk and that the designation should be clearly shown.

*Walsall.*

Dr. J. A. M. Clark accounts for the very high infant mortality by epidemics of measles and whooping-cough throughout the greater part of the year. Influenza was prevalent in the first quarter and diphtheria excessive throughout the whole year. The reorganisation of the medical and nursing services of the corporation has been a great gain in efficiency and economy. Much more work has been accomplished in health visiting and school nursing without a numerical increase of the staff. Dr. Clark points out that much is needed to bring the public health services up to an efficient standard. The lack of an efficient isolation hospital hampers work in many ways. A maternity home is a real necessity and with it an antenatal clinic. At the present time expectant mothers attend one of the centres and are advised by the superintendent health visitor. It is most desirable, says Dr. Clark, that arrangements should be made at an early date for the regular attendance of an obstetrical expert at this centre.

There is room for further developments in the school medical service. An orthopædic clinic, already approved, is important; an additional school clinic, also approved, will do much to obviate the great overcrowding at existing clinics. More open-air schools are needed. The existing open-air school does good work, but it has only accommodation for 60, and there is always a long waiting list. Mr. Griffiths, the school dentist, reports that there is much scope for educating parents in proper feeding and the requirements of oral hygiene. Among the younger children the enamel of the first permanent molars is frequently defective, and Mr. Griffiths attributes this to vitamin deficiency during the first two years of life. The percentage of acceptance of dental treatment is rising, being as high as 85 in some schools and averaging 62. There are many other sanitary requirements of the borough. Unsatisfactory registered slaughter-houses can be closed under the new local Act, but must remain until a public abattoir is provided. Out of 19,000 water-closets about half have no flushing cisterns and have to be flushed by buckets, &c. There are thousands of large fixed ash-pits which should be replaced by sanitary bins. No back-to-back houses or houses without through ventilation have been erected for some 50 years, and the 800 or so of this type which remain are too worn out to repair and should be condemned as soon as the housing scarcity has been relieved. Building is proceeding more rapidly and 1053 houses on the two principal housing estates are projected immediately.

*Halifax.*

Dr. Cyril Banks reports that during the last five years a move has really been made in converting the pail-closets into water-closets. During 1925, 1241 were dealt with and there remain to be altered 15,162 in situations where a water-supply and sewer are available. The condemnation of the Crossfields area is an important sanitary measure which has received the approval of the Ministry since the close of the year. The public water-supply is being extended to suburban districts where the private supplies have been unsatisfactory. During the last five years notable progress has been made with regard to smoke abatement. Mr. Clinch, the chief sanitary inspector, who is an expert in this matter, reports that 182 observations of half an hour each were made, chiefly of chimneys likely to be offenders, and that in 27 cases the limit of two minutes in the half an hour was exceeded. In one case a prosecution was undertaken and a fine of £15 imposed. Every effort is made to encourage smokeless cooking and heating. The gas department supply excellent coke at 25*s.* a ton, and the charge for gas is 2*s.* per 1000 cubic feet. There are now nearly 50,000 gas-fire appliances in the 27,000 houses. The electricity department also encourages the use of domestic appliances.

Premises for a new infant welfare centre have been acquired in Northgate-street. The maternity homes in connexion with the Royal Halifax Infirmary and St. Luke's Hospital appear to meet the needs of the town, and antenatal clinics are held regularly at both institutions. The corporation have arranged to pay to these institutions the cost of maintenance and to recover the money from the patients; but in practice this arrangement has not been greatly used, because the patients have found that it costs them less to go into the infirmary direct than under the corporation's arrangements. There were 74 notifications of diphtheria during the year, with 10 deaths. Of the 10 fatal cases, 1 died at home and the other 9 died within 24 hours of admission to hospital, the disease being too far advanced for antitoxin to be of any value.

*West Bromwich.*

Dr. Allan B. Hamilton (acting M.O.H.) submits the report, owing to the death of Dr. Woolsey Stocks in December, 1925. Although 862 houses have been built by the council during the last five years and 256 by private enterprise, housing conditions still remain bad. Not only is the shortage of houses not being overtaken, but the requirements of the increasing population are not even being met. Overcrowding shows no signs of improvement. The following are some examples given in the report: A bedroom measuring 1068 cubic feet occupied by man, wife, and six children; bed-sitting-room occupied for living and sleeping purposes by man, wife, and five children; three families, including 14 persons, occupying a house with two bedrooms; back-to-back house with single bedroom occupied by widow and subtenants consisting of man, wife, son aged 18, and daughters aged 25, 23, 20, and 13; house with single bedroom occupied by man, wife, sons aged 20 and 17, and daughters aged 25, 23, and 12; bed-sitting-room occupied for living and sleeping purposes by man, wife, and five children, the latter all sleeping in one bed. Comparing 1919 and 1925 there is an improvement in the general state of repair of dwellings; but owing to the housing shortage the number of persons per house has increased, and the number of houses occupied by more than one family is higher by 50 per cent. These figures are based on the examination of 1527 houses which were inspected both in 1919 and 1925. The borough has no sanatorium and the 13 beds retained at other sanatoriums are obviously inadequate.

*Llanelly.*

Dr. Laurence W. Pole submits a very complete report on health conditions in Llanelly, which is one of the chief centres of the tinplate industry, and has doubled in population in the last 40 years. Plans have been prepared for a maternity home, and an orthopædic scheme for the children is under consideration. Antenatal work began in 1924; 54 expectant mothers attended the centre in that year and 91 in 1925. Beyond giving advice of a general character in regard to food, habits, clothing, &c., no treatment is prescribed. The work hitherto undertaken does not therefore appear to be of the nature of preventive obstetrics. Much attention has been given to the milk-supply and the bacterial examinations show a considerable improvement during the last three years. During 1925, 27 samples came within the Certified standard, 20 within Grade A, and 11 were outside Grade A. The average daily consumption of milk per head is only about one-quarter of a pint, and Dr. Pole hopes that the improvement in cleanliness will encourage the public to use more milk. A curious incident occurred in the summer—namely, the spreading of a rumour that about half the bakers in the town were suffering from bakers' dermatitis. The statement was made in public, but inquiry showed that there was no foundation for it and that only eight cases

of skin disease had occurred in the past five years. A consignment of apples from Cardiff was found to be excessively contaminated with arsenic and was returned to the importer. Overcrowding is general in the town owing to housing shortage. Much good work has been done, however, in the renovation of old property which was rapidly becoming derelict. The 41 wooden houses mentioned in the 1924 report are almost ready. The corporation housing estate is nearly built up and a new area of 36 acres is under consideration for housing purposes.

The school report shows a marked improvement in the cleanliness of children. Dr. Jean Mackintosh reports on the classes for dull and backward children. One of the difficulties the teacher has to contend with is the variation of the age of the pupils. In a class of 15 there may be children of three or four different age-groups. These children do not get the advantage of teaching in housewifery and handiwork, and the provision of a special school, not at present financially feasible, would be the best solution. The eye specialist would like to see myope classes established, and the school dentist complains that 50 per cent. of the notices sent out to the parents are entirely ignored. Before a dental scheme for school-children can be entirely successful the active coöperation of the teacher is essential.

*Bilston.*

Dr. T. Ridley Bailey reports that the industries in his district—iron and steel, tinplate, &c.—have no special harmful effect on health. Nearly all the privies in the district have been converted into water-closets. There is great need for a destructor, as the four tips give rise to nuisances. In the meantime Dr. Bailey urges that the suggestions of the Ministry of Health should be carried out in order to keep the tip nuisance down to a minimum. Trouble has been caused by van and shack dwellers on an area of land at Stowheath with no proper water-supply or sanitary accommodation, and dwellings in a deplorable condition. As the result of legal proceedings the area has now been cleared. There is much overcrowding and an acute housing shortage. The building of houses has not provided for the natural increase of the population and has done nothing to relieve overcrowding. Since 1919 the council has built 663 houses. The people in most urgent need of houses are unable to pay even the minimum rents. Examples of the rents are given. At an old internment war-camp of huts the weekly rents are 2*s.* 3*d.* to 4*s.* 6*d.* For municipal wooden dwellings with three bedrooms the rent is 8*s.* 6*d.* Other houses built by the council have rents varying from 9*s.* 4*d.* to 14*s.* 6*d.* The council has schemes in hand for the erection of 230 more houses. There is no antenatal work nor any facilities for orthopædic treatment. Last year Dr. Bailey congratulated the council on the great progress made in various directions, but he points out that "the continued excessive infantile mortality remains the chief blot in our history" and that overcrowding must be remedied "before any pride in our work is really justified."

## MENTAL HOSPITAL REPORTS.

THE *Cumberland and Westmorland Mental Hospital* had the low death-rate of 6·9 per cent. during 1925 and a recovery-rate of 26·5 per cent., which was quite good considering the very small proportion of recent and curable cases admitted. The general health was satisfactory, and there were no epidemic diseases except influenza. The committee has decided to instal a cinematograph apparatus, which will be very welcome. There is at present no occupation officer, and parole is very limited. The dentist continues to provide valuable services. The medical superintendent discusses in his report the difficult problem of mental nursing.

The seventy-third annual report of the *City of Worcester Mental Hospital* at *Powick* records a satisfactory year with no epidemic disease save a mild influenza, and no cases of colitis. A visiting dentist has been appointed and attends fortnightly, and the necessary dental apparatus has been purchased. A new main water-supply is being laid down, and it is hoped that electricity may shortly be supplied for lighting and power. The recovery-rate was 34·42 per cent. and the death-rate 7·23 per cent. Post-mortem examinations were made on 70 per cent. of the fatal cases. Every suitable case among those about to be discharged is sent out first on trial. The farm and garden provide occupation for about 14 per cent. of the male inmates, some of whom have allotments of their own.

The *City of Cardiff Mental Hospital* has the interesting inclusion of a report from the secretary of the League of Social Service, which is in charge of the after-care work. Discharged patients have been visited and helped in various ways and granted allowances, clothing, or help from appropriate funds. The hospital is crowded on the male side, and had at the close of the year 570 resident patients. General paralysis accounted for 13·58 per cent. of the admissions, but in spite of this there was a recovery-rate of over 40 per cent. The death-rate was 8·5 per cent. Autopsies were held in all cases where permission could be obtained. The percentage of deaths from tuberculosis has steadily decreased during the last five years, dropping from 13·5 in 1921 to 9·8 per cent. last year. The visiting dentist examined 515 cases and made 524 extractions during the year, as well as scalings and fillings. The aural and gynæcological surgeons have treated 127 and 81 cases respectively and performed 25 minor operations. General paralytics were treated by induced malaria; three showed physical but no mental improvement, while four others improved sufficiently for discharge and resumption of work in a subordinate capacity. Research has been carried out on the estimation of phosphorus and calcium in the blood plasma and cerebro-spinal fluid and the presence of porphyrin in fæces. Eleven nurses passed their final examination. The medical superintendent conducts an out-patient clinic at the Royal Infirmary. The visiting commissioner remarks that no one can fail to be impressed by the tremendous effort being made to relieve the patients and to make them as comfortable as their mental state will allow.

The *Middlesbrough County Borough Mental Hospital* has 450 patients, of whom 66 per cent. are kept usefully employed. The recovery-rate was 42·5 per cent. and the death-rate 8·1 per cent. In addition to an epidemic of prevalent influenza there were 23 cases of small-pox in January, but none proved fatal. A system of electric lighting has been installed throughout the buildings and the erection of a cinematograph has been begun. There are 30 more cases resident than can properly be accommodated, and there is danger of serious overcrowding. There is also need for separate provision for treating new admissions apart from epileptics and sick patients. The visiting dentist does not yet pay weekly visits, which limits the value of his work. Seven more nurses have obtained their final certificate, bringing the total to 16. Foot-and-mouth disease was prevalent in the district during the year, but fortunately the measures taken to protect the farm cattle were successful.

The report of the Inspector-General of *Mental Hospitals for New South Wales* records that there are over 8000 insane persons under official cognisance in the State, distributed among ten mental hospitals and three licensed houses. There was an increase of 120 in the year ending June, 1925, over the previous 12 months, giving a proportion to the general population of 1 : 275. The general recovery-rate rose by 2 per cent. to 42·16 per cent. Over 1000 patients were granted leave or discharged on probation during the year. The death-rate was 7·19 per cent., general paralysis accounting for the greater proportion of this figure. Roughly one-third of those admitted to the reception houses were discharged, and so were saved the necessity of certification. The problem of overcrowding became very grave, and resolute steps

were taken to deal with it by the erection of several new wards, while an entirely new hospital is shortly to be built to cope with the steady increase in the numbers of mental patients. There is still urgent need, however, for accommodation for the criminal insane, many of whom are now improperly retained in gaols. There is a psychiatric clinic, with accommodation for 132 uncertified patients, working in harmony with the out-patient department at the local hospital. The fact that its work has far outgrown the available accommodation shows that legislation is needed to permit the ordinary mental hospitals to accept voluntary boarders. As a matter of fact there are voluntary boarders in all the hospitals, but the procedure has not been regularised. Still more urgent is the need for a Mental Defectives Act, since New South Wales has failed so far to follow the example of other English-speaking countries in providing for the education and segregation of these cases. As the report observes, the situation is serious, for the mental and physical standard of the race is involved.

## SCHOOL MEDICAL SERVICE.

THE following table summarises the figures given in the school reports for two county areas and one city :—

| Name of district. | No. on roll. | Average elem. school attendance. | No. of routine examinations. | No. of special examinations and re-inspections. | Percentage of children found on routine examination requiring treatment.† |
|---|---|---|---|---|---|
| West Riding of Yorkshire | 194,683 | —* | 67,079 | 13,924 | 27·54 |
| Bedfordshire. | —* | —* | 5,087 | 1,812 | 22·03 |
| Birmingham. | —* | —* | 39,216 | 66,243 | 26·04 |

* Not given. † Excluding dental defects and uncleanliness.

*West Riding of Yorkshire.*

Although steady progress has been made in ascertainment and treatment, Dr. J. R. Kaye maintains that "much of the labour involved should be prevented if child-welfare work assumed greater proportion and the ideals of prevention of ailments and promotion of health were kept more in view." The keynote of his stimulating report is his belief that "the index of efficiency in school medical work is the number and quality of the special inquiries made."

In reviewing some of the special inquiries made by the staff on regional peculiarities, Dr. Kaye sums up: "The sturdy independence and self-reliance of the textile workers is in the direct line of the best Yorkshire tradition. This independent attitude stands in bold contrast to that of the mining population who wait to have everything done for nothing." Although the wages in the mining districts and the textile areas are comparable, the children in the mining districts are neither as clean nor as well fed as those in the textile areas—unfortunately, the latter have recently shown some falling away in general condition owing to unemployment. Local inquiries have shown inadequate and ill-balanced dietary in many of the districts, and Dr. Kaye joins voice with the many medical officers who call for the systematic teaching of food values and the inclusion of simple dietetics in the school curriculum. Hygiene must not only be taught but practised in the school, and to keep windows closed so as to keep up the temperature is as reprehensible to Dr. Kaye as was the excuse given for the absence of soap in a lavatory—that it might be stolen. Much praise and encouragement is given to the teachers who have established open-air classes, and attention is drawn to the excellent experiment in one area in arranging for children from overcrowded homes to sleep in tents under the supervision of teachers. The problem of accommodating the abnormal children is acute in most rural districts and the West Riding is no exception—there are 562 delicate children attending elementary schools and 1023 at no school; 307 feeble-minded children are in attendance at ordinary elementary schools, whilst 202 receive no training and presumably little supervision.

*Bedfordshire.*

Dr. R. T. Herdman reports that during 1925 there was a severe epidemic of mumps and influenza which lowered the general health of the children in the county. In some areas measles and whooping-cough were also prevalent and consequently there was a drop in the average attendance. But in spite of the lowered condition of the children, the height and weight of entrants and leavers is markedly better than that of pre-war children. Entrants during 1925 are on the average nearly 1 inch taller and 1 lb. heavier than the average pre-war child of the same age. Following the long journey to school, many of the children in the county arrive with wet feet and stockings; this lowers their vitality and is especially bad for rheumatic conditions. Dr. Herdman suggests that a spare pair of stockings and shoes should be kept in the school for each child. A simple pattern of felt slippers could be made by the elder girls. In reviewing medical inspection since it was started in 1908, Dr. Herdman traces the rise of parental interest and the increasing help of teachers and interested laymen. In 1909 79 per cent. of those examined required treatment, which, according to Prof. Kenwood, compared favourably with the rest of the country. In 1925 only 22 per cent. required treatment. Coincident with this decrease in the percentage requiring treatment, there has been a steady increase in the percentage of those obtaining it—from under 40 per cent. in 1909 to over 70 per cent. in 1925. The defect showing the highest incidence was anæmia (416), followed by defective vision and squint (256), and then debility (defective nutrition) 239. This rather indicates that the children in Bedfordshire are not in such good general health as are the children in many of the large urban districts.

*Birmingham.*

Dr. G. A. Auden's report is of outstanding interest; efficiency and enthusiasm are shown alike in the close ascertainment of defective and exceptional children and in the provision made for them. The total sum of the treatment undertaken by the school medical staff is comparable to that of a fair-sized general hospital. Mr. F. B. Gilhespy, the aural surgeon, has interesting things to say about mastoid operations, and of his own cases 75 per cent. promise favourable results. A useful comparison is made between the condition of the teeth of children in Birmingham and in New Zealand. The proportion of perfect sets of teeth in Birmingham between the ages of 14 and 16 is 60 times as great as in New Zealand. Whilst the nutritional and hygienic standards are higher in New Zealand, these factors are outweighed by the influences of more eating between meals and the greater consumption of confectionery. Dr. Auden insists that cripples will exist as long as the causes of deformity remain, and that it is practicable to prevent the conditions that produce the cripple. Much has already been done in Birmingham by open-air and physical deficiency schools and by remedial exercise clinics, and this year there will be a new clinic for massage and electrical treatment. Dr. Elizabeth Moffett, reporting on hypermetropic children, states that there is great improvement in their school work after wearing appropriate glasses for a short time—probably the strain of focusing near work is too great for the less robust. These observations may in part explain the difficulty which many children of apparently normal intelligence find in learning to read and write.

In a close analysis of 69 cases of encephalitis lethargica Dr. Auden argues that special provision for these cases is a pressing need. Their intellectual capacity is rarely sufficiently reduced to make them certifiable as mentally defective, and they are unsuitable to mix with those whose intelligence is much

inferior to their own. Dr. A. P. Thomson looks upon rheumatism as a specific infection; the main factors leading up to it are unhygienic conditions associated with poverty and bad housing, and particularly dampness and lack of sunlight. It is within his experience that rheumatic children who have had early tonsillectomy are less liable to febrile attacks and heart damage. Ultra-violet rays have been found beneficial, though Dr. Thompson finds no evidence that this treatment is specific. Rheumatic children are often highly strung. They are likely to be backward from loss of schooling and may suffer from educational pressure. But the experience gained at the Barkerville School shows that with suitable methods they make good progress.

## INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED JULY 17TH, 1926.

*Notifications.*—The following cases of infectious disease were notified during the week:—Small-pox, 157 (last week 128); scarlet fever, 1493; diphtheria, 854; enteric fever, 67; pneumonia, 517; puerperal fever, 49; cerebro-spinal fever, 7; acute poliomyelitis, 8; acute polio-encephalitis, 2; encephalitis lethargica, 47; continued fever, 3; dysentery, 13; ophthalmia neonatorum, 110. There were no cases of cholera, plague, or typhus fever notified during the week.

*Deaths.*—In the aggregate of great towns, including London, there were 4 (1) deaths from enteric fever, 14 (3) from measles, 6 (3) from scarlet fever, 31 (4) from whooping-cough, 25 (5) from diphtheria, 48 (8) from diarrhœa and enteritis under 2 years of age, and 22 (7) from influenza. The figures in parentheses are those for London itself.

## ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the Committee 35 cases were considered and £388 10*s.* voted to 25 applicants. The following is a summary of some of the cases relieved:—

Daughter, aged 56, of M.R.C.S. Eng., 1858, who practised in London and died this year. Assistance is asked for a holiday as the applicant has been in hospital for three months and has undergone two serious operations. Voted £10.

L.R.C.P., aged 76. Owing to age, is unable to get locums although quite fit to undertake the work. Lives with married son, who contributes towards the keep of himself, his wife and the applicant, while the latter is responsible for the rent of 25*s.* a week. Applicant's only income consists of the Epsom Pension of £40 and Fund Pension of £26 per annum. Special appeal made for help to meet arrears for rent. Committee voted £5. Total relief given by the Fund is £82 to March, 1925; elected to an annuity of £26 Jan. 1st, 1926.

Widow, aged 70, of L.S.A. who practised in London and died in 1897. Has been in domestic service for 15 years and a year ago fell downstairs and broke her wrist. She pluckily continued working, but finally had to give up and go into the infirmary where she remained for some months. Recently a lady offered her a room rent-free but the applicant has to pay something towards her maintenance. Fund voted £12 in 12 monthly instalments of £1 each, and an application has been made for the Old Age Pension.

Daughter, aged 48, of M.R.C.S. Eng. who practised in the Midlands and died in 1910. Her mother died eight months later. Applicant started a small business but was induced to sell it so that she could live with and help some relatives. Finding that she was not strong enough to do the work she left them, and with the proceeds of the sale went to Australia, hoping that her health would improve. She returned home at the end of four months, and has since sold her belongings, clothes and jewellery. The Charity Organisation Society found her starving in an underground room, gave her temporary help, and referred the case to the Fund, which was able to get her much needed hospital treatment; she is subject to acute asthma and bronchitis, and is not strong enough to work. She is to go to a convalescent home and the Fund has voted her £26 in 12 monthly instalments of £2 3*s.* 4*d.* each. Previous relief amounts to £18.

Widow, aged 40, of L.R.C.P. Edin. who practised in Wales and died in 1923. Left with four children, ages 8 to 18, and with only £100 per annum to support herself and family. Son, aged 17, requires help for maintenance whilst studying. Voted £3 for three months. Previous grants for the same purpose total £29 10*s.*

Daughter, aged 27, of M.R.C.S. Eng. who practised in London and died in 1907. Applicant is confined to bed with heart disease and her only income is £1 a week allowed by an aunt. As she requires constant attention a sister gave up a post in Canada to come home and nurse her. The Fund is asked to assist towards the expenses. Voted £10.

Subscriptions may be sent to the Hon. Treasurer, Sir Charters Symonds, at 11, Chandos-street, London, W. 1.

# Correspondence.

"Audi alteram partem."

## THE VALUE OF POPULAR LECTURES.

*To the Editor of* THE LANCET.

SIR,—In a paper read at the Jubilee Congress of the Royal Sanitary Institute, Dr. W. A. Daley drew attention to the value of popular lectures as a method of health propaganda. Dr. Daley both at Blackburn and more recently at Hull has arranged for many such lectures the practical results of which have been exceedingly good. Writing from my own experience in giving some thousands of such lectures in recent years, I should like to corroborate every word he said. With regard to venereal disease the result of a series of addresses in a town or district where there is a clinic established, but where there has been no popular instruction, is to double and even treble the attendances at the hospital or clinic, and not only that, but it is found of late years, though the number of fresh cases is steadily decreasing, the number of attendances at the treatment centre are very much more numerous, showing that as a result of the instructions given by the lecturers added to the advice of the medical officers, the sufferers have realised that it is necessary to continue treatment even when the first painful and unpleasant symptoms have subsided. This, of course, is extremely satisfactory.

I have found also that lectures to the fathers and mothers of school-children, and to women attending maternity and child welfare centres, lead to an appreciable increase in the number of expectant mothers seeking that antenatal advice and treatment which is so conducive to future good health. The scientific and physiological facts of athletic sports and strenuous games have after many years begun to receive that attention which has long been their due. Popular lectures on the Physiology of Motion, and the rudiments of getting and remaining "fit," and the "re-creation" of the body by games and proper physical exercises, are now frequently demanded by boy scoutmasters, girl guiders, teachers in elementary and other schools, as well as experienced athletes. I find such lectures followed with the greatest attention, and they give rise to any number of intelligent questions from the audience.

Dr. Daley remarks on the difficulty of getting enough medical lecturers to carry on this sort of work. There are two things essential to make such lectures go down well. The first that the lecturer should be heard, and the second that what is heard is adapted and suited to those who hear it. A well-organised free film showing is a great asset in attracting a suitable audience, and it is wise to give the lecture and explain the film as far as may be required before showing it. I most cordially agree with what Dr. Daley says about the value of addresses to clubs, brotherhoods, and such like organised gatherings. The members are intelligent and spread the light in their districts. The recent regulations of the Ministry of Health will largely help those local authorities who may wish to make use of these valuable methods of instruction in health matters under the ægis of their medical officers of health.

I am, Sir, yours faithfully,

London, July 26th, 1926. E. B. TURNER.

## THE STUDY OF EPILEPSY.

*To the Editor of* THE LANCET.

SIR,—The American National Association for the Study of Epilepsy as a part of the Ligue Internationale contre l'Epilepsie is anxious to promote a gathering and closer union of those neurologists and psychiatrists of all nations who are interested in the broad field of epilepsy and convulsive diseases.

I have been appointed delegate by the National Association for the Study of Epilepsy to attend the sessions of the Gesellschaft deutscher Nervenärzte in Düsseldorf in September, and shall be in Europe during that month, hoping to get into contact with all workers in this field. Communications from those who are interested should be addressed to me at the Psychiatric Clinic, Nussbaumstr. 7, Munich, Germany.

I am, Sir, yours faithfully,

OTTO WUTH,
Associate in Psychiatry of the Johns Hopkins Hospital and University and A.O. Professor of Psychiatry in the University of Munich.
Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore, July 15th, 1926.

## JOINT ACTION.

### LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LTD., AND THE MEDICAL DEFENCE UNION, LTD.

*To the Editor of* THE LANCET.

SIR,—The Councils of the Medical Defence Union, Ltd., and the London and Counties Medical Protection Society, Ltd., have agreed that each Society will defend a member in an action arising out of the acts or omissions of an assistant or locum tenens, who is a member of the other Society, as if the assistant were a member of the same Society as the principal, and similarly in the case of actions against members on the staff of hospitals against whom actions are brought arising out of the acts or omissions of duly appointed subordinate medical officers.

We are, Sir, yours faithfully,

HUGH WOODS,
General Secretary,
London and Counties Medical Protection Society, Ltd.,
Victory House, Leicester-square, W.C.

JAMES NEAL,
General Secretary,
Medical Defence Union, Ltd.
49, Bedford-square, W.

## IMMUNITY AND MALIGNANT TUMOURS.

*To the Editor of* THE LANCET.

SIR,—With reference to the paper by Dr. Thomas Lumsden in THE LANCET of July 17 on the above subject, in which he describes cytolytic effects in vitro on mouse tumour and curative results in rat sarcoma by means of antisera of animals inoculated repeatedly with cancer tissue of another species, may I point out that the method is not new. In 1912 the late Dr. Carrington Purvis (Grahamstown) used serum obtained from sheep, which he had inoculated several times with specially prepared human cancerous tissue. His object was to obtain "a cytolitic serum which would kill the cells of cancer occurring in a human being." He thought that he obtained necrosis in a large epithelioma of the face in a patient under his care by subcutaneous injections of the inoculated sheep serum. In the same year I inoculated rats repeatedly with mouse tumour, and the sheep, goat, and rabbit repeatedly with fresh human mammary cancer tissue. I inoculated sheep repeatedly with human cancer serum also. In all cases the reactions of the blood-serum of these animals, after repeated inoculation, were found to run parallel with reactions I had obtained previously with antidiphtheritic serum and other immune sera, and in a recurrent operative advanced abdominal case of cancer treated with the inoculated sheep serum it was thought improvement followed. The results of my experiments in 1912 were given in a paper before the International Congress of Medicine held in London in 1913. In August, 1924, I repeated the inoculation experiments in the sheep at the Brown Institution with results which fully confirmed my earlier ones. In my letter to THE LANCET, which you published on March 14th, 1925, I drew attention to these facts, and noted that the sheep is more responsive to inoculation than the rat, rabbit, and goat. At the same time the question arose as to whether the horse might be a more suitable donor, as in the usual preparation of antidiphtheritic serum. In his present paper Dr. Lumsden states that "an antiserum made by inoculating human mammary cancer into sheep kills mouse tumour cells in vitro practically instantaneously." He goes on to say that the antiserum is non-toxic to other normal mouse tissues, and, in short, "perhaps the most specifically anti-malignant of all the sera tested is the antiserum obtained from a sheep which has been repeatedly inoculated with human mammary cancer and human breast tissue."

No reference is made to the work of Purvis and mine by Dr. Lumsden, whose work is considered new by the lay Press.—I am, Sir, yours faithfully,

J. A. SHAW-MACKENZIE, M.D. Lond.
London, W., July 22nd, 1926.

## A LARGE DOSE OF ASPIRIN.

*To the Editor of* THE LANCET.

SIR,—The following seems worth recording.

A healthy woman, aged 35, with no history of alcoholism, commenced to drink brandy very heavily and continued to do so for three weeks. On the day I was called to her she had consumed the contents of a bottle of brandy between 8 A.M. and noon, and had also taken the contents of a large bottle of hair-wash labelled eau-de-quinine, popularly believed to be an excellent emmenagogue. About 3 P.M. she took in one dose 485 gr. of aspirin in tablet form. Two hours later she vomited copiously, and I saw her about 5.30 P.M. Her face was cyanosed, respiration 40, pulsus alternans, and complaining of "air-hunger." No active treatment was adopted; she was placed under constant observation and quickly recovered, showing during recovery slight œdema of the face and complaining of very severe headache.—I am, Sir, yours faithfully,

J. HARGREAVES ROBINSON.
Harley-street, W., July 25th, 1926.

## SUBDURAL HÆMORRHAGE.

*To the Editor of* THE LANCET.

SIR,—The recording in THE LANCET of May 22nd of cases of toxic subdural hæmorrhage by Mr. A. G. Banks and Dr. A. M. N. Pringle prompts the publication of the following two cases.

CASE 1.—On April 15th, 1923, I was called to see a male patient, strong, aged 50, married, but no children, who told me that two days previously he went to bed at 10 P.M. as well as usual, but about 12 P.M. was awakened by an unbearable attack of pain in the back of the head, heaviness in the eyelids that prevented him from opening his eyes, and dyspnœa. A doctor prescribed sedative cachets during the next day, but they were of no avail. On examination the patient showed a normal temperature, pulse, and respiration, and no sign of new paralysis (he had suffered from paraplegia from infancy) but could not open his eyes on account, he said, of heaviness. Severe headache and pupils somewhat dilated. I suspected subdural hæmorrhage and advised lumbar puncture, but could not obtain his wife's permission. A second opinion was obtained, and my colleague advised a bacteriological examination of the blood and cerebro-spinal fluid. In the evening I received a report that there were no malarial parasites in the blood. On puncture cerebro-spinal fluid came out under pressure. A request followed from the patient to "come and puncture him," because the small quantity of fluid removed had relieved his headache very much. I removed about 40 c.cm. of bloody fluid. The headache was almost completely relieved. I visited him on the 17th. His eyes were open, but he noticed that the field of vision in his left eye was contracted. On the 18th I punctured him again and took out about 30 c.cm. of fluid, but this time it was colourless. The general condition of the patient improved, and the headache disappeared. To-day—more than three years later—the patient is in perfect health, but the field of vision in the left eye is still contracted.

CASE 2.—On Feb. 16th, 1924, a woman came to me for a severe attack of pain in the lower part of the head. Before I saw her another doctor had prescribed her some sedative cachets, of which she swallowed one. When a few yards from the pharmacy she felt very weak and entered the house of a friend to get rested. She remained there about an hour, and then got ready to go home, but suddenly fell on the floor unconscious. Her face became cyanosed, respiration stertorous. The doctor who had prescribed the cachets ordered stimulant and gave a bad prognosis. When I was summoned I found a patient, aged about 40, well built,

unconscious, cyanosed, eyes bulging, pulse 150, very weak and filiform, respirations hurried and stertorous, temperature subnormal, pupils much dilated, corneal, conjunctival, and cutaneous reflexes wholly absent. I injected cardiac stimulants, and in an hour's time she began to improve—pulse became stronger and slower, respirations easier, cyanosis began to fade out, superficial reflexes reappeared. On Feb. 17th the general condition was good, but she was completely unconscious save when, from time to time, she would cry from severe headache. I made a lumbar puncture. Fluid came out under high pressure, bloody-red, but with no clots. I removed about 50 c.cm. At once the patient looked relieved, and began to speak some intelligible words. On the 18th she was more or less conscious, and after a week she came to see me enjoying very good health.

I hope these details are of sufficient interest to warrant space being given to them.

I am, Sir, yours faithfully,

Beirut, Syria. H. SHEHADEH, M.D.

## TUBERCULOSIS IN THE SHETLAND ISLANDS.

*To the Editor of* THE LANCET.

SIR,—In your issue of July 10th Dr. Willoughby raises a very interesting point in regard to the ætiology of tuberculosis and one that does not seem to have attracted sufficient attention. The comparatively high rate of tuberculosis infection in the Shetland Islands is, to my mind, what is not unusual in districts or countries where the native cattle enjoy comparative freedom from tuberculosis. Is this not true of Japan, where bovine tuberculosis is of comparatively recent introduction?—and what about India, where a large proportion of the native population do not drink cows' milk? Is tuberculosis any less in these countries than it is here? One must remember that other factors—dietetic, hygienic, historical—come into play, and any investigation on the lines suggested by Dr. Willoughby would have to take these into consideration.

Again, is it not a fact that the clinical type of tuberculosis seen in the bovine-free areas is of a more virulent type? I happen to see a good few cases from the Shetlands and some of the northern counties and western isles, and comparatively few of them recover under treatment. The specific resistance of the individual affected is poor and the disease usually runs an acute course with a fatal termination. The good old fibroid type is certainly less in evidence than in the more populous areas farther south. That might partly be due to the fact that tuberculosis has not been with the Shetlanders so long as with us further south. But taking all these factors into consideration, one must admit that your correspondent's suggestion that "the ingestion of constant submorbific doses" of the bovine type of tubercle bacilli does play its part in conferring some immunity "in counteraction of the human type of the disease" is a valuable one and worthy of full investigation.

I am, Sir, yours faithfully,

FELIX SAVY.

The Grampian Sanatorium, Kingussie, July 27th, 1926.

THE LATE DR. R. E. HORSLEY.—Dr. Reginald Ernest Horsley, who has died at the age of 63, was the son of Captain Charles Horsley, of the East India Company's Service. Born at Sydney, New South Wales, he was educated at Sydney Grammar School, Trinity College, Dublin, and the Universities of Melbourne and Edinburgh, and Berlin. Graduating in medicine at Edinburgh in 1885, he served for some time as secretary to the scientific staff of the *Challenger* Expedition Commission. In 1890 he became F.R.C.S. Edin. and three years later M.D. Devoting his attention to ear, nose, and throat work, he held appointments as clinical assistant at the Royal Infirmary and surgeon to the Edinburgh Ear and Throat Dispensary. In 1890 he was secretary to the Section of Otology at the International Medical Congress at Berlin. For some time Dr. Horsley was physician to Stonyhurst College, but in 1903 he retired from practice in order to give his whole time to literary work; he published several novels and books of travel and adventure. Settling eventually at Crail he became a magistrate and later provost of that royal burgh—an office which made him Admiral of the Forth. Dr. Horsley married Mary, daughter of the late Mr. William Inglis, of Kirkmay.

# Parliamentary Intelligence.

## HOUSE OF LORDS.

THURSDAY, JULY 22ND.

*Mental Deficiency Bill.*

Viscount GAGE, Lord-in-Waiting, in moving the second reading of the Mental Deficiency Bill, said the most important provision was in Clause 1, where the definition of a mentally defective person was altered and extended to include persons affected by injury or disease since birth or early age. There was a difference between mental deficiency and lunacy. The latter was caused by a general breakdown of the normal faculties, but in the case of a mentally deficient person there was actually some physical defect in the brain. Naturally, therefore, the majority of these cases occurred either at birth or by development at an early stage of the individual's life. There were cases where some injury or disease, particularly the disease known as encephalitis lethargica, produced a condition analogous to innate mental deficiency. Under the existing definition it was impossible to certify these individuals as mental defectives, owing to the inclusion of the words "from birth or from early age." Under this Bill this would be remedied, and these persons would be able to be attended to in a proper kind of mental home. There were certain other amendments made in the original Act of 1913.

The next most important provision occurred in Clause 6. Subsection (1) of that clause provided that a local authority might build a larger institution that it required and take cases by contract from other local authorities. An institution for from 500 to 1000 places was more efficient as well as more economical than a smaller institution, and some of the smaller local authorities would themselves need an institution containing this number of beds. Subsection (2) of this clause contained provisions allowing the local education authority and the mental deficiency authority—both committees of the one council—to provide a joint institution should they deem that desirable. This clause had the approval of the Board of Education. The remaining clauses of the Bill merely made small administrative changes which had been found desirable. The Bill had been very thoroughly investigated by a committee on which all the leading specialists on the subject were represented as well as the medical Members of the House of Commons, and he understood that it had their entire approval.

The Bill was read a second time.

On Monday, July 26th, the Mental Deficiency Bill passed through Committee and was reported to the House without amendment.

On Tuesday, July 27th, the Mental Deficiency Bill was read a third time and passed.

## HOUSE OF COMMONS.

WEDNESDAY, JULY 21ST.

*London Doctor and the Telephone Directory.*

Mr. MACKENZIE LIVINGSTONE asked the Postmaster-General whether he was aware that Dr. A. E. W. Idris, practising as an anæsthetist in London, had suffered loss in consequence of his name having been negligently omitted from the London Telephone Directory for October, 1925; and what steps he proposed to take to compensate this gentleman.—Viscount WOLMER (Assistant Postmaster-General) replied: I am aware that through an unfortunate error, which I greatly regret, Mrs. Idris's name was inserted in the London Telephone Directory for October, 1925, instead of Dr. Idris's. One of the conditions relating to entries in the Telephone Directory is that the subscriber shall have no claim against the Post Office in respect of any omission or error and, in the circumstances, I am not able to grant compensation to Dr. Idris. I have, however, offered to bear the cost he had incurred in notifying the error to a number of his clients, but this has been refused by Dr. Idris.

THURSDAY, JULY 22ND.

BOARD OF EDUCATION VOTE.

The House went into Committee of Supply on the Civil Service Estimates for 1926–27.

On a vote of £28,300,000 for the salaries and expenses of the Board of Education,

Lord EUSTACE PERCY, President of the Board of Education, said that the Board was continuing to reduce the size of the classes in the elementary schools. On March 31st, 1924, there were 24,972 classes with over 50 children on the roll. These figures related to children on the roll and not average attendances. They did not mean that actually 50 children were being taught in all these classes, but that 50 children

were on the roll. On March 31st, 1925, there were 21,345 such classes, or a reduction of more than 3600. The figures for March 31st, 1926, were not yet available, but on that date, compared with March 31st, 1925, there were 17,000 more children in average attendance and, on the other hand, they had 1129 more teachers. These figures meant that on March 31st, 1925, 14 per cent. of all the classes in the elementary schools in England and Wales had over 50 children on the roll, 56 per cent. had not more than 40 children on the roll, and 28 per cent. had not more than 30 on the roll. The question of buildings and accommodation was the main problem that they had to consider at the present moment. They had schools on what were called the black lists, with something over 500,000 children at present on the roll. Of these, 27 per cent. were council schools and about 73 per cent. were voluntary schools. Of 219 council schools on Black List A, 65, or about 30 per cent., had already been dealt with by proposals contained in the revised forecasts for this year, and these forecasts also provided for 30 more schools to be built by local authorities which would take the place of black-listed voluntary schools. The programmes gave every hope that they would have tackled this part of their problem completely, or more or less completely, by 1930. The total amount of elementary school buildings provided for in the revised forecast, leaving out building proposals which had been dropped this year, was 244 new schools and 111 enlargements—a very large programme. The progress in regard to the voluntary schools had not been so great. Some 21 voluntary schools had been removed from Black List A since the original estimates were prepared and 30 more were being dealt with by local authorities this year, making a total of 51, or about 10 per cent. of the total number of voluntary schools on Black List A.

Mr. TREVELYAN moved to reduce the vote by £100. He said that a great many of them were extraordinarily uneasy about the policy being pursued by the President of the Board of Education. The Government were in financial difficulties and the President of the Board had found it necessary to have a year or two of delay and reaction, and they were told that they would have to wait for a revival of trade. The Labour Party challenged the whole position that educational expenditure ought to depend in any sense upon the general condition of the trade of the country. When good times came, if ever they did recur, they would not be able by the expenditure of money to improvise an educated generation of the children who were now losing educational advantages. They were inclined to say that in times like these, when the gulf between the rich and the poor was greater, that was the time when the nation ought to try to bring the two closer together by providing national education.

Mr. HARRIS said that a matter which had been omitted from the statement of the President of the Board was the provision of special schools. There was nothing more pathetic in the great cities than the large number of mentally defective and physically defective children. It was one of the curses of civilised life, of overcrowded streets, and bad housing that they seemed to breed these puny, miserable, mentally starved children. In London they had done great work in giving these children a chance by giving them an extra two years in special schools. Not only in that way did they give a chance to the child, but they saved the State in the long run, because these children, instead of becoming a charge on the State, became in nine cases out of ten breadwinners and able to earn their own living. There was still a very large number of areas in which no provision whatever was made in the way of special schools. Twenty-seven county authorities and 102 non-county authorities made no provision for special schools. He knew that the President was conscious of this deficiency. He was all for economy and against waste, but for God's sake do not let them economise at the expense of these unfortunate children. Do not let them hold up their training while the Board was inquiring as to some ideal method. They knew that the Chancellor of the Exchequer was a hard nut to crack, but if the President would see that he was provided with the necessary funds to enable local authorities to carry out their duties he could be assured of the support of all parties in the House.

Dr. HADEN GUEST said we were no longer a nation ruled by a governing class, by people equipped however effectively up to a certain limit at the public schools. We were a nation ruled by an immense democratic many-headed majority; and unless that democracy was really well educated in the best sense of the word we should not be able to solve the tasks that were facing us. He would be glad if they could get a real improvement in the general health of the population. A general improvement in the standard had been going on, although there had been a reaction in the last year or two. Probably, however, they would be able to get over that. If they could get a really high level of health and a really national system of education, which would put all to a certain extent on the same level, he believed that the nation would be able to solve its problems. If they were to have in the nation a common mind and the possibility of all coöperating together, they must have a common background in the minds of the children of the nation.

The Duchess of ATHOLL, Parliamentary Secretary to the Board of Education, replying to the points raised in the debate, said that if hon. Members would look at the estimates they would see that the capital expenditure approved by the Board last year was higher in the case of elementary, secondary, special, and medical services than in any year since the war. Therefore the Board was not standing still. There had been a steady advance in special services, and there were 3800 more special school places than previously. It was impossible to ignore the state of trade, but they must get the best possible value by organisation as well as by the quality of the teaching. If in time of great financial difficulty they were able not only to hold their ground, but make an appreciable and steady advance in essentials and in laying their foundation, they hoped to see a far better structure erected and possibly make an all-round advance in the progress of education.

The motion to reduce the vote was negatived by 221 votes to 97.

*Government and Nursing Home Report.*

Mr. CAMPBELL asked the Minister of Health whether the Government proposed to adopt the report of the Select Committee on Nursing Homes; and whether he was aware of the urgency of action which was needed in this respect to meet the condition of less well-off middle-class families.—Mr. NEVILLE CHAMBERLAIN replied: There has not yet been time for the Government to consider the report and I am accordingly unable to make any statement on the first part of the question. The second part of the question does not appear to arise out of the report, and I can only say that there are in any case no funds at my disposal enabling me to meet what I understand to be the object of my hon. friend.

*Rehousing Schemes in Insanitary Areas.*

Mr. CAMPBELL asked the Minister of Health whether he would state the attitude of his department towards the policy of erecting blocks of tenement dwellings to provide alternative accommodation for those people now crowded into insanitary areas; and whether, if his department approved the policy, he proposed to recommend its consideration to the different local authorities.—Mr. NEVILLE CHAMBERLAIN replied: Where proposals for clearing insanitary property are approved it is the practice of my department to require that provision shall be made for rehousing the persons to be displaced. The precise form of the provision will depend on the circumstances of the particular case. While I think the working-classes can generally be housed better in cottages than in blocks of tenements, there are certainly cases in which it is necessary to adopt the latter form of accommodation, and in such cases the erection of tenements would be sanctioned.

*Indian Medical Service and Free Passages.*

Colonel DAY asked the Under Secretary of State for India if his attention had been drawn to the disappointment expressed by the Indian members of the Indian Medical Services at the concession of free passages to Europe and back lately granted to European members of the Indian Medical Service, which had not been extended to include Indian members; and, with a view to establishing and maintaining the standard of prevailing knowledge and efficiency, would he consider recommending the extension of travelling facilities being afforded Indian members.—Earl WINTERTON replied: My noble friend has received and considered memorials from Indian members of the Indian Medical Service on this subject, but he has found it necessary to maintain the principle on which the leave passage concessions are confined to officers of non-Asiatic domicile. The claims of the Indian members of the service, so far as they relate to facilities for study, are receiving further consideration.

*Slum Clearances in Southwark.*

Colonel DAY asked the Minister of Health the number of dwellings to be proceeded with by the London County Council on the Tabard-street, Southwark, clearance and rebuilding scheme; the number of such dwellings that had been completed; and when it might be expected that the remainder would be completed.—Mr. NEVILLE CHAMBERLAIN replied: The Order confirming the scheme to which the hon. Member refers required the provision of rehousing accommodation for 2580 persons, and accommodation has already been provided for 2388 persons in 424 tenement dwellings erected on the area. By an amending Order, dated July 10th last, the number of persons to be rehoused was increased by 1000, and I think that the hon. Member may be assured that no time will be lost by the London County Council in completing the amended scheme.

*Injured Workmen and Hospital Treatment.*

Mr. NEIL MACLEAN asked the Under Secretary to the Scottish Board of Health whether he was aware that John Welsh, senior, valve-shaft camp, and John Welsh, junior, intake ii. camp at Balfour and Beattie's Contract, at Fort William, were both injured at work, one suffering from head injuries and the other suffering from a fracture of leg at ankle; that both these men were under treatment at the company's hospital at Fersil Camp and were both ordered to leave the hospital on July 5th; that they were again ordered to leave the following morning; that the company having refused the request of their panel doctor to accommodate the men, he (the panel doctor) sent them to the Belford Hospital, Fort William, that night; that these injured men were refused admittance to the hospital and had to lie out all night; and that all the men on the contract had deductions taken from their wages for this hospital; and whether he could state upon whose orders they were ejected from the Fersil Camp Hospital, and who gave the instructions that they were to be refused admittance to the Belford Hospital, Fort William.—Major ELLIOT replied: There seems to be some confusion concerning these cases. John Welsh, aged 26, was injured as long ago as April 14th, remained for four weeks in bed at Fersil Camp Hospital, and for two weeks on crutches. On July 7th, after being for 12 weeks under treatment, he was seen by the compensation officer, who stated he was fit for light duty. He did not accept the position, and after a further six days accommodation at Base Camp was sent by his panel doctor to the Belford Hospital, where, after examination by the medical superintendent, he was informed that the case was not one for hospital treatment, and was accordingly not admitted. The medical superintendent's report is that the original injury was not a fracture, but a severe sprain and that recovery would be assisted by light exercise. The other case of John Welsh is that of a man who received a head injury on May 31st. There was no evidence of fracture, but simply of scalp injury. He was removed on July 7th to Base Camp as not being further in need of hospital treatment. He remained at Base Camp until July 13th without being asked to do any duty. He left to see his panel doctor, who in this case also sent him to the Belford Hospital. After examination by the superintendent he was not admitted as not being in need of hospital treatment. I understand that contribution to the Belford Hospital is on a voluntary basis and that some men pay and some do not. With regard to the last two parts of the question I have not yet specifically ascertained on whose instructions these men were dismissed from Fersil Hospital. The refusal of admission to Belford Hospital was given as part of his duty by the medical superintendent of the hospital.

*Dairy Cows in Great Britain and Other Countries.*

Mr. ROBERT WILSON asked the Minister of Agriculture the proportion of milk-producing cows to the population in Great Britain, with comparative figures in other countries for which statistics were available.—Mr. GUINNESS replied: The number of dairy cattle per 100 of the population in the undermentioned countries, subject to difference of definition and classification, is as follows:—

| Country. | Population. | Year. | No. of dairy cattle. | Year. | No. of dairy cattle per 100 of population. |
|---|---|---|---|---|---|
| Great Britain . | 43,783,000 | 1925 | 3,163,523 | 1925 | 7·2 |
| Irish Free State | 3,163,000 | 1925 | 1,264,368 | 1925 | 40·0 |
| France .. | 39,310,000 | 1922 | 7,303,940 | 1923 | 18·6 |
| Germany .. | 62,642,000 | 1924 | 9,723,238 | 1924 | 15·5 |
| Holland .. | 6,977,445 | 1921 | 1,085,713 | 1921 | 15·6 |
| Belgium .. | 7,744,259 | 1924 | 839,076 | 1924 | 10·8 |
| Denmark .. | 3,377,000 | 1924 | 1,368,548 | 1924 | 40·5 |
| Rumania .. | 16,750,000 | 1923 | 2,426,233 | 1923 | 14·5 |
| U.S.A. .. | 112,078,611 | 1924 | 22,255,000 | 1924 | 19·9 |
| Canada .. | 9,226,740 | 1924 | 3,726,985 | 1924 | 40·4 |
| Australia .. | 5,873,503 | 1924 | 2,304,644 | 1923–24 | 39·2 |
| New Zealand .. | 1,384,130 | 1924 | 1,292,286 | 1924 | 93·4 |

*Note.*—The figures for foreign countries have been taken from the latest Year Book of the International Agricultural Institute and from the official publications of the countries concerned.

MONDAY, JULY 26TH.

*Medical Services in Windward and Leeward Islands.*

Mr. HURD asked the Secretary of State for the Colonies whether he had received information from the Windward and Leeward Islands that their steamship communications with the outside world were now restricted to a single unpunctual monthly freighter without cold-storage capacity; and whether, as this isolation was affecting the school and medical necessities of the islands, remedial measures could be taken through the Imperial Economic Committee, or in any other way.—Mr. AMERY replied: I am aware that the subsidised steamship service hitherto operated by the Royal Mail Steam Packet Company between Canada and the Colonies mentioned has been withdrawn and replaced by a service of the nature indicated. The question was considered by the recent West Indian Conference and a resolution passed by that conference has been transmitted to the Government of Canada. As my hon. friend is aware, the agreement concluded at Ottawa in 1925 between the Government of Canada and the governments of the West Indian and other colonies provided in Article IX. for steamship services to the Windward and Leeward Islands, and pending the establishment of such services I do not consider that there is any further action which I could usefully take in the matter.

*Out-relief to Miners' Families in Lichfield.*

Mr. ARTHUR GREENWOOD asked the Minister of Health whether he had received any communication regarding the conclusions reached by the Lichfield Board of Guardians at its meeting on Friday, July 23rd, on the question of the continuance or non-continuance of out-relief for miners' wives and children.—Sir KINGSLEY WOOD replied: Yes, Sir. My right hon. friend is informed that the guardians resolved to continue to relieve the wives and children of strikers. He is taking steps to obtain further information.

TUESDAY, JULY 27TH.

*Pay of the Royal Army Medical Corps.*

Sir PHILIP RICHARDSON asked the Secretary of State for War whether the Warren Fisher Committee on the pay of the R.A.M.C. had now made a report; when it was proposed to revise the pay; and from what date.—Sir L. WORTHINGTON-EVANS replied: The answer to the first part of the question is in the affirmative, as will be seen by reference to the answer given by my right hon. friend the Prime Minister on June 15th. As regards the remainder of the question, the revised rates of pay, which have already been announced in Army Order 196 of 1926, took effect as from July 1st.

*Hospital Treatment of Scottish Workmen.*

Mr. NEIL MACLEAN asked the Under Secretary to the Scottish Board of Health by whose instructions the camp commandant at Fersil Camp ordered two men, both named John Welsh, and suffering from injuries received at work, to leave the camp hospital late on July 5th, and again at breakfast on July 6th; whether these instructions were issued from the offices of the firm at Fort William; and whether the company provided any conveyance to take these men to Fort William, 25 miles distant.—Major ELLIOT replied: I am informed that the instructions were given by the company's headquarters office at Fort William and that the men were conveyed there by the company's train.

*Food and Drugs Legislation.*

Major Sir GRANVILLE WHELER asked the Prime Minister whether he could give facilities for the passing of the Sale of Food and Drugs Act (1875) Amendment Bill during the present session.—Mr. BALDWIN replied: I regret that I see no prospect of time being found for this Bill, but I would remind my hon. and gallant friend that the Bill which was introduced by Brig.-Gen. Clifton Brown has been dropped.

*Approved Societies and Dental Committee's Findings.*

Mr. HORE-BELISHA asked the Minister of Health whether the findings of the Dental Committee would be submitted to each approved society for consideration before any action was taken thereon.—Sir KINGSLEY WOOD replied: Any agreement which may be arrived at as the result of the discussions now in progress between representatives of the approved societies and of the dental profession will be submitted before any action is taken thereon to the Consultative Council on Approved Societies' Work, which is the recognised statutory body representative of approved societies.

THE LATE DR. E. W. SEYMOUR.—Dr. Edgar William Seymour, M.V.O., who has died at Cowes at the age of 58, was educated at Cambridge and St. Bartholomew's Hospital, graduating in medicine in 1893. Like his father and grandfather before him, he was attached to the Royal household at Osborne, being appointed Surgeon Apothecary to Queen Victoria and Surgeon in Ordinary to Princess Beatrice. He was also surgeon to the Royal Yacht Squadron and consulting physician to the Royal Convalescent Home for Officers, Osborne, but retired from practice some years ago.

# Medical News.

UNIVERSITY OF OXFORD.—At a Congregation held on July 24th the degree of Bachelor of Medicine was conferred on D. I. Rees, T. C. Hunt, J. H. Kennedy, and J. N. C. Ford. The Theodore Williams Scholarship in Physiology has been awarded to Frank Raymond Crookes (University College) and John H. Hunt (Balliol).

UNIVERSITY OF LONDON.—A meeting of the Senate was held on July 21st, the Vice-Chancellor, Sir William Beveridge, being in the chair.—The thanks of the Senate were accorded to Mr. Donald MacAlister for his offer to inaugurate a fund for the establishment of a medal in memory of his father, Sir John MacAlister, to be awarded to students at the School of Librarianship at University College; and regulations were adopted for the award thereof.—Dr. E. B. Verney was appointed as from August 1st, 1926, to the University Chair of Pharmacology tenable at University College. He was educated at Tonbridge School, Downing College, Cambridge (1913–16), where he obtained a First Class in Part I. of the Natural Science Tripos in 1916, and at St. Bartholomew's Hospital (1916–18). From 1918–19 he served with the R.A.M.C. From 1921 to 1924 he was assistant in the Department of Physiology at University College, and since 1924 has been assistant in the Medical Unit at University College Hospital. In July, 1922, he was awarded a Beit Memorial Fellowship and was re-elected for a fourth year in 1925. He has published a paper in the Proc. Roy. Soc. (1926) and six papers in collaboration with others in the *Journal of Physiology* (1922–26), Proc. Roy. Soc. (1925), &c. —The resignations of Dr. W. E. Curtis from the University Readership in Physics at King's College, on appointment to the Chair of Physics at Armstrong College, Newcastle-on-Tyne, University of Durham, and Dr. Major Greenwood from the University Readership in Medical Statistics at University College, were accepted as from Dec. 31st and July 31st, 1926, respectively.—A Diploma in Nursing was instituted; and regulations were adopted for the award thereof.—Among the doctorates conferred were the following: D.Sc. in Biochemistry, Mr. J. H. Quastel, an internal student of the Imperial College—Royal College of Science, for a thesis entitled "(1) The Relationship of the Chemistry of Resting Bacteria Towards Bacterial Growth, and (2) A Theory of the Mechanism of Oxidations and Reductions in vivo."—The Rogers Prize of £100 for 1926 was awarded to Dr. Robert Coope for an essay entitled the Value of the Various Methods of Investigating Diseases of the Pancreas.—The University Studentship in Physiology for 1926–27, of the value of £50 and tenable for one year in a physiological laboratory of the University or of a school of the University, has been awarded to Dr. E. T. Conybeare. He proposes to undertake research in physiology at Guy's Hospital, particularly on the clinical side, and possibly also to extend his work on anæsthesia in relation to its clinical application.—Dr. E. Graham Little has been elected chairman of the Council for External Students; Sir Holburt Waring chairman of the Finance Committee; and Sir Wilmot Herringham chairman of the Library Committee and of the Committee of the Medical Members of the Senate.

At recent examinations the following candidates were successful:—

M.D. EXAMINATION.

*Branch I., Medicine.*—Frank M. Barnes, St. Thomas's Hosp.; Frank B. Byrom, London Hosp.; Mahmoud A. B. Demerdash, Univ. Coll. Hosp.; Helen W. Duncan, University of Liverpool; Louis Forman, Guy's Hosp.; John T. Ingram, London Hosp.; Leslie M. Jennings, St. Bart.'s Hosp.; and Eileen M. Saxton, London Sch. of Med. for Women.

*Branch II., Pathology.*—Edward C. Dodds, Middlesex Hosp.

*Branch III., Psychological Medicine.*—Isabella McD. Robertson, St. George's Hosp. and Maudsley Hosp.

*Branch IV., Midwifery and Diseases of Women.*—Mary N. Andrews and Barbara V. Lucas, London Sch. of Med. for Women; Dulcie H. Lukis, London Sch. of Med. for Women and St. Mary's Hosp.; Douglas A. Mitchell, Guy's Hosp.; and Mildred M. E. Yate, London Sch. of Med. for Women.

*Branch VI., Tropical Medicine.*—John A. W. Ebden, Westminster Hosp., and Richard M. Morris (University medal), London Hosp. and London School of Tropical Medicine.

M.S. EXAMINATION.

*Branch I., Surgery.*—Arthur J. Gardham, Univ. Coll. Hosp.; Archibald L. P. Jeffery, St. Thomas's Hosp.; and Basil L. Laver, Guy's Hosp.

*University College.*—The following awards have been made in the Faculty of Medical Sciences:—

Bucknill Scholarship: Flora Hargreaves. Epsom Scholarship: J. C. S. Wells. Medical Entrance sExhibitions: C. W. F. Burnett; M. P. Ellis. Anatomy: Gold Medal (Senior Class), D. F. Ogborn (since deceased); Silver Medal (Junior Class), Flora Hargreaves. Histology and Embryology: Silver Medal, Flora Hargreaves. Organic and Applied Chemistry: Silver Medal, P. D. Mottet. Physiology: Schafer Prize, A. S. Parkes; Gold Medal (Senior Class), Margaret D. Wright. Pharmacology: Silver Medal, D. F. Ogborn (since deceased).

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.—The following results are announced in the sessional examination (March to July) of the division of Tropical Medicine and Hygiene:—

*Passed with distinction:* R. Crawford (winner of Duncan and Lalcaca medals), E. G. Sayers, J. C. Paisley, I. G. MacGregor, W. Thomson, R. W. Thomas, T. C. Wakefield, R. B. Jackson, K. A. MacKay, J. A. W. Ebden, A. F. Babonau, and E. Le Clezio.

*Passed:* D. S. Adkins, E. M. Clow, B. G. Wheatley, H. M. O. Lester, A. Schourenkoff, P. Milne, C. L. Digby Roberts, B. E. Ebden, W. S. Urquhart, M. K. Murray, V. A. Stookes, C. C. Taffs, I. Magdi, I. T. Kunaratnam, G. Sanders, G. C. Bergman, A. J. Boase, J. McNabb, V. J. G. MacGregor, W. Yuen, M. D. Macqueen, W. D. Pollard, D. I. Gracey, H. J. F. Wood, J. E. Chow, M. Din, A. J. Lee, G. W. Mearns, J. E. Howard, J. H. McDonald, A. M. K. O'Halloran, D. D. N. Selvadurai, A. Brooks, J. Symington, B. Merrin, C. Kearney, N. G. Rodriguez, and B. Chiostri.

UNIVERSITY OF EDINBURGH.—At the graduation ceremony held on July 23rd the following degrees were conferred:—

DOCTOR OF MEDICINE.

*William J. Adie (in absentia), Stanley E. Bethell, ‡Duncan G. Cooper, Francis R. Cripps (in absentia), ‡James P. Davie, ‡James K. D. Ingram, Schalk W. Joubert, †Ian E. M'Cracken, James M. Manson, *George A. Masson, Johannes A. Pienaar (in absentia), Ruth J. D. Ritchie, William A. Robertson, Robert C. Scott, Jocelyn Mary S. Scovell, and ‡Harry C. Sinderson (in absentia).

* Awarded gold medal for thesis. † Highly commended for thesis. ‡ Commended for thesis.

The degrees of Bachelor of Medicine and Bachelor of Surgery were conferred on 145 successful candidates, whose names were given in THE LANCET of July 24th, p. 207.

The following awards have been made:—Cameron Prize in Practical Therapeutics: Henry H. Dale, F.R.S., Head of the Department of Biochemistry and Pharmacology under the Medical Research Council. Gunning Victoria Jubilee Prize in Chemistry: George H. Percival. Gunning Victoria Jubilee Prize in Materia Medica: George A. Masson. Milner Fothergill Medal in Therapeutics: Andrew Rae Gilchrist. Lauder Brunton Prize in Pharmacology and Therapeutics: Adam C. White. Ettles Scholarship and Leslie Gold Medal: George Brown. Allan Fellowship in Clinical Medicine and Clinical Surgery: Derrick M. Dunlop. Stark Scholarship in Clinical Medicine: John G. Kininmonth. M'Cosh Graduates and Medical Bursaries: John B. Colquhoun. Mouat Scholarship in the Practice of Physic: George Brown. Buchanan Scholarship in Gynæcology: Robert L. Turner. James Scott Scholarship in Midwifery: May Jones. Beaney Prize in Anatomy and Surgery: James Ernest Monro. Conan Doyle Prize: Stanley Jackson. Annandale Gold Medal in Clinical Surgery: James E. Monro. Murdoch Brown Silver Medal in Clinical Medicine: George R. Burnett. Scottish Association for Medical Education of Women Prize: May Jones. Dorothy Gilfillan Memorial Prize: May Jones. Sir Robert Jones Prize in Orthopædic Surgery: James D. A. Gray. Pattison Prize in Clinical Surgery: James D. A. Gray. Wightman Prize in Clinical Medicine: Wilhelmina Mary Grace MacLennan. Wellcome Medals and Prizes in the History of Medicine: Gold Medal, Alexander F. K. Clarkson; Silver Medal, Duncan W. D. MacLaren. Cunningham Memorial Medal and Prize in Anatomy: Ernest L. Godfrey. Whiteside Bruce Bursary: Arnold G. M'Lean.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—At a quarterly meeting of the College held on July 20th, the President, Dr. G. M. Robertson, in the chair, Dr. James Davie Gilruth was introduced and took his seat as a Fellow. It was announced that Dr. James Walker Dawson had been appointed Morison Lecturer for 1927. The Victoria Jubilee Cullen Prize was awarded equally between Dr. G. Lovell Gulland and Dr. Alexander Goodall.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At a meeting of the College held on July 23rd, Dr. A. Logan Turner, the President, in the chair, the following 28 successful candidates out of 66 entered, who passed the requisite examinations between March 29th and April 5th, were admitted Fellows:—

Robert F. Aitken, Harnandlall Batra, Charles E. M. Blumer, Richard R. S. Bowker, William H. B. Bull, Alexander W. Davidson, George V. Davies, Homi Darashaw Gandhi, William C. Gray, Charles W. Harrison, Neil R. Houston, David R. Jennings, Oswald E. J. McOustra, Hugh Miller, John C. Moir, Phani Bhusam Mukerji, Thomas Nicol, James R. K. Paterson, Roland L. Raymond, John J. Robb, Gerald I. Secluna, Arthur B. Smith, John Sturrock, James E. Sykes, Elizabeth N. Thompson, Esmond F. West, Robert K. Wilson, and William A.-Dains Woolgar.

ST. THOMAS'S HOSPITAL OLD STUDENTS' DINNER.—This dinner will be held on Friday, Oct. 29th, at the Hotel Victoria, Northumberland-avenue, W.C., at 7 for 7.30 P.M. Dr. R. Percy Smith will take the chair.

IN a list just issued are recorded the names, appointments, and degrees of old students of St. Thomas's Hospital. The names are also classified under place of residence, and particulars are given of the times of attendance of members of the staff, together with telephone numbers and other details which will be found useful by those who have to do with the hospital.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL.—A new operating theatre, which has become a necessity, will shortly be opened. The Ladies' Association is contributing £500 towards its cost and other donations have been received, but a further sum of about £500 is needed. The committee is taking active steps for an extension of the hospital to cope with the increasing number of patients. In the first six months of the year nearly 1000 were admitted.

DONATIONS AND BEQUESTS.—The late Alderman John Bowen, J.P., of Birmingham and of Malvern, left by will £1250 to the Birmingham General Hospital to endow a bed in memory of his son.—By the will of the late Mr. George Sparks, of Littlehampton, Sussex, the testator left £500 to the Littlehampton and District Hospital and £500 to the Littlehampton and District Nursing Association.

ORDER OF THE NILE.—The King has given his licence and authority to Dr. O. F. H. Atkey, Director of the Sudan Medical Service, to wear the insignia of the Third Class of the Order of the Nile, and to Dr. R. M. Humphreys, Inspector, Sudan Medical Service, to wear the insignia of the Fourth Class of the same Order. These decorations have been conferred by the King of Egypt in recognition of valuable services rendered by the recipients.

KIDDERMINSTER HOSPITAL.—Last week the Duke of York opened extensions to this hospital, to the cost of which the Prime Minister has contributed £5000. The extensions include two children's wards, one named after Princess Elizabeth, the Duke's baby daughter, and the other after Mr. Stanley Baldwin. They contain 40 beds, and the other improvements include an out-patient department and new scientific and medical equipment.

METROPOLITAN ASYLUMS BOARD: NEW APPOINTMENTS.—At the meeting of the Board on July 24th Dr. F. H. Thomson, medical superintendent, North-Eastern Hospital, was appointed chief medical officer, Infectious Hospitals Service, in succession to Dr. F. Foord Caiger. At the same meeting the Board also appointed Dr. Eliot Swainston and Dr. Alexander Joe as medical superintendents in their Infectious Hospitals Service. Dr. Swainston, who has been senior assistant medical officer in the Board's Infectious Hospitals Service since 1909, has been allocated to the South-Western Hospital, and will take up duty there on Oct. 5th. Dr. Joe, who is at present assistant medical officer of health, city of Edinburgh, has been allocated to the North-Western Hospital, and will fill the vacancy which will shortly be caused by the retirement of Dr. E. W. Goodall.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—Arrangements have been made at the Brompton Hospital to permit graduates to attend the daily clinical practice of the hospital during August. The small fee charged is payable to the secretary of the Fellowship, who will issue the necessary permit. The Queen's Hospital for Children, Bethnal Green, will give an all-day course from August 16th to 28th, in which the diseases of children of all ages will be dealt with from both a medical and surgical standpoint. The hospital staff have kindly undertaken to provide a simple lunch and tea, and graduates will have access to all parts of the hospital during the whole of the period. From August 23rd to Sept. 4th the Queen Mary's Hospital, Stratford, has organised an all-day brush-up course for those who wish to renew their acquaintance with up-to-date hospital practice. The time-table provided includes demonstrations in general surgery, medicine, orthopædics, laryngology, &c. The hospital has a new pathological department and also maternity wards and antenatal clinics. The City of London Maternity Hospital provides courses on obstetrics and child welfare; these are held weekly and are limited to four graduates. Personal application must be made to the secretary of the Fellowship. Practical courses in anæsthetics can be arranged at any time. Full particulars of these and other courses, and copies of the *Post-Graduate Medical Journal* may be had from the Secretary of the Fellowship at 1, Wimpole-street, London, W. 1.

COLLEGE OF NURSING.—The Queen has consented to become patroness of the College of Nursing. Established in 1916, the College has a membership of over 25,000. Its headquarters in Henrietta-street, Cavendish-square, London, were officially opened by Her Majesty in May.

Messrs. Burroughs Wellcome and Co. announce that they can now supply sodium salts of *d*-tartaric, *l*-tartaric, *meso*-tartaric, citric, fumaric, and mucic acids. These agents are employed in the differentiation of bacterial types in which sugar reactions are untrustworthy or fail altogether.

VIROL RESEARCH SCHOLARSHIP IN PATHOLOGY.—The scholarship of £200 offered annually by the directors of Virol, Ltd., for the encouragement of research in clinical pathology, has been awarded by the examiners (Sir William Willcox, Sir Bernard Spilsbury, and Dr. Knyvett Gordon) to Miss Thirza Redman, M.B. Liverp., M.Sc., Ph.D. Lond., for research work on rickets.

NORTH WALES MENTAL HOSPITAL OVERCROWDED. Dr. R. W. Branthwaite, the Commissioner of the Board of Control, who recently inspected this hospital at Denbigh, reported that it was overcrowded to the extent of 57 patients, "a position, having regard to the steady admission rate, that is disquieting." He strongly urged the provision of a properly equipped pathological laboratory, and the Committee of Visitors has now voted the necessary money.

MENTAL DEFECTIVES IN THE WEST RIDING.—The West Riding County Council has decided to purchase Oulton Hall and 315 acres between Leeds and Pontefract, as the nucleus of a home for mental defectives in place of Rawcliffe Hall, near Goole, which the Board of Control considers to be very unsatisfactory. The cost of acquiring Oulton Hall, which has until recently been a military pensions hospital, will be £22,500, and a further £30,000 will have to be spent upon making the place ready for 150 patients. The Board of Control desires the county council to provide a home for between 1500 and 2000 patients, the cost of which would be not less than half a million; at present there are 1200 mental defectives in the West Riding. A colony will have to be created upon the estate, and Oulton Hall would then be used as staff headquarters.

THE POST-GRADUATE HOSTEL.—The Post-Graduate Hostel was inaugurated on Monday, July 26th, with an address from Sir D'Arcy Power, in which he, as President of the movement, hoped for its ample support not only from the post-graduates themselves, but also from all members of the medical profession. "The idea," he said, "is intended to meet the wants of those who are so young in spirit as to feel that there is still much to be learnt, and have left their practices for a time to see what advances medicine has made, or who are still so young in body as wisely to have determined upon a wanderjahr before settling to their life's work." He went on to describe the organisation of the hostel, the arrangements made at the Imperial Hotel for the accommodation of post-graduate students, and the plans arrived at for conducting discussions to be opened by prominent chairmen, while he alluded to the possibility of impromptu dances finding a place among the activities of the adherents.

EPSOM COLLEGE.—Founders' Day was celebrated at Epsom on Saturday last, July 24th, when Earl Grey of Fallodon presented the prizes and opened the new chemical block. The headmaster, Mr. A. C. Powell, was able to point to the erection of these new buildings as a proof of the progress of the school, since teaching accommodation for at least 100 more boys would be provided, while the raising of the admission age would merge the preparatory school into the general body. Lord Grey gave an interesting address to a large assembly in which, while doing justice to the medical profession as a career which appealed alike to the imagination and the intellect, he demurred at too early a specialisation in education. Accordingly he approved the aim at Epsom to give the boy a good general training, while he expressed himself in favour of the maintenance of Greek as a school subject, and recommended to boys the study of natural history as a recreation.

The new chemical block, which was designed by Messrs. Barry and Son and built by Messrs. Cropley Bros., comprises laboratories, a theatre, lecture-rooms and class-rooms, and the usual annexes for carrying out practical chemical work. The guests who inspected these were also able to see the transformation of the library, the large structural changes recently undertaken in the lower school building, and the new and beautiful panelling in the memorial chapel—these being the innovations which in the main account for a heavy expenditure during the year, and for the necessity of relaxing no pains to increase the income of the Foundation

THE death is announced of Mr. Henry Kemp-Welch, for over 23 years secretary of Cheyne Hospital for Children, Chelsea. Mr. Kemp-Welch, who retired last year, had been connected with the hospital practically since its foundation 51 years ago.

PRESENTATION TO SIR JAMES CRICHTON-BROWNE.—Sir James Crichton-Browne has resigned the office of treasurer of the Royal Institution, which he has held for 37 years, and as a memento of his valuable work his fellow members have given him a silver cup. The presentation was made on July 20th by the Duke of Northumberland, who said that it was a striking testimony to Sir James Crichton-Browne's services that during his term of office the endowment fund had risen from £22,743 to £122,500. The work itself had been done in the intervals of a busy life whose motive was always a love of and zeal for the truth, and in their friend they had a rare combination of devotion, sound judgment, unfailing tact, and the ability to inspire confidence and friendship. Sir James Crichton-Browne, in acknowledging the gift, predicted increasing success for the work of the Institution.

# Medical Diary.

*Information to be included in this column should reach us in proper form on Tuesday, and cannot appear if it reaches us later than the first post on Wednesday morning.*

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, Wimpole-street, W.

MONDAY, August 2nd, to SATURDAY, August 7th.—WEST END HOSPITAL FOR NERVOUS DISEASES, 73, Welbeck-street, W. Special Course, consisting of clinical demonstrations upon selected cases, will be given at this Hospital at 5 P.M. as follows:—Tues., Dr. Hobbouse: Disseminated Sclerosis. Wed., Dr. Hobhouse: Hemiplegia and Local Cerebral Lesions. Thurs., Dr. Macnamara: The Sequelæ of Encephalitis Lethargica. Frid., Dr. Worster-Drought: Clinical Forms of Neuro-Syphilis.

# Appointments.

CLAPHAM, H., M.R.C.S., L.R.C.P. Lond., has been appointed one of the Medical Referees under the Workmen's Compensation Act for the Districts of the County Courts of Biggleswade, Huntingdon, Peterborough, St. Neots, and Thrapston and Oundle.

HOWELL, B. WHITCHURCH, F.R.C.S. Eng., Honorary Surgeon to Cheyne Hospital for Children, Chelsea.

SOUTER, W. C., M.B., Ch.B. Aberd., Ophthalmic Surgeon to the Aberdeen Royal Infirmary.

SWAINSTON, E., M.D., B.S. Durh., D.P.H. Camb., Medical Superintendent of the South-Western Hospital, Stockwell, S.W., Metropolitan Asylums Board.

Metropolitan Asylums Board: JOE, A., M.D., Ch.B., D.P.H. Edin., and SWAINSTON, E., M.D., B.S. Durh., Medical Superintendents.

Willesden General Hospital: BOURNE, A. W., M.B. Camb., F.R.C.S. Eng., a Member of the Honorary Consulting Staff; PHILLIPS, L. G., M.S., M.B. Lond., F.R.C.S. Eng., Honorary Gynæcologist.

Certifying Surgeons under the Factory and Workshop Acts: CURRIE, S. H., L.R.C.P. Lond., M.R.C.S. (Swanscombe); MITCHELL, J. C. D., M.B., Ch.B. Glasg. (Berwick); RAMAGE, J. H., M.B., Ch.B. Glasg. (Neilston, Renfrew).

# Vacancies.

*For further information refer to the advertisement columns.*

*Aberdeen Royal Infirmary.*—Two Hon. Jun. Asst. S.'s.
*Bath, Royal Mineral Water Hospital.*—Res. M.O. £130.
*Bath Royal United Hospital.*—Asst. H.S. £100.
*Birmingham City Mental Hospitals.*—Asst. M.O. £350.
*Bolingbroke Hospital, Wandsworth Common, S.W.*—H.S. At rate of £120.
*Bolton Infirmary and Dispensary.*—First H.S. £150.
*Bradford, Children's Hospital.*—H.S. £100.
*Bradford Royal Infirmary.*—H.S. £150.
*Brighton, New Sussex Hospital for Women and Children.*—Temp. Hon. Asst. Anæsthetist.
*Burnley, Victoria Hospital.*—H.S. £150.
*Burton-on-Trent Infirmary.*—Jun. Res. H.S. £150.
*Cardiff, Prince of Wales' Cripples Hospital.*—H.S. £100.
*Cardiff, Welsh National School of Medicine.*—Lecturer in Pathology. £750.
*Derbyshire County Council.*—Asst. County M.O. £750.
*East African Medical Service.*—Sanitation Officer. £660.
*Hastings, Royal East Sussex Hospital.*—Hon. Clin. Asst. in X Ray Dept.
*Infants Hospital, Vincent-square, Westminster.*—Jun. Anæsthetist.
*Leicester Isolation Hospital and Sanatorium.*—Res. M.O. £350.
*Manchester, Ancoats Hospital.*—Res. M.O. £150.
*Manchester, Crossley Sanatorium, Delamere Forest.*—Asst. M.O. £200.
*Manchester Hospital for Consumption, &c.*—Res. M.O. £200.
*Miller General Hospital for South-East London, Greenwich-road, S.E.*—Sen. Res. M.O. £250.
*Papa Westray, Orkney.*—M.O. and P.V. £360.
*Poplar Metropolitan Borough.*—M.O.H. £1100.
*Sheffield Royal Hospital.*—Surg. Reg.
*Western Australia.*—Inspector-General of the Insane. £960.

The Chief Inspector of Factories announces a vacancy for a Certifying Factory Surgeon at Bollington (Cheshire).

# Births, Marriages, and Deaths.

## BIRTHS.

HAYDEN.—On July 18th, at Graham-road, Hendon, the wife of Captain A. F. Hayden, M.B., F.R.C.S., I.M.S. (retd.), of a daughter.

MACKAY.—On July 17th, at Cliftonville, the wife of Dr. J. M. Mackay, W.A.M.S., of a daughter.

PENDERED.—On July 25th, the wife of J. H. Pendered, M.D., F.R.C.S., Cumberland House, Southampton, of a daughter.

## MARRIAGES.

LIVINGSTON—EDWARDS.—On July 21st, at Wonston, Hants, Alexander Livingston, M.B., Ch.B., M.D.S., to Margaret Aubrey, third daughter of Canon W. G. Edwards, M.A., and Mrs. Edwards, of Wonston Rectory.

## DEATHS.

MACLAGAN.—On July 19th, at Ravensdowne, Berwick-upon-Tweed, Charles George Maclagan, M.B., C.M., aged 66.

PERRY.—On July 18th, accidentally drowned, Lionel Banks Perry, M.B., B.C. Camb., aged 41.

SEYMOUR.—On July 24th, at Debourne, Cowes, I.W., Edgar William Seymour, M.V.O., M.B. Camb.

THOMSON.—On July 18th, at Bridge-street, Musselburgh, Midlothian, Andrew Douglas Ramsay Thomson, F.R.C.P. Edin., aged 74.

*N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.*


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# Notes, Comments, and Abstracts.

## BRITISH CHEMICAL PLANT EXHIBITION.

THIS exhibition, organised by the British Chemical Plant Manufacturers' Association in connexion with the forty-fifth annual meeting and congress of chemists, was held at the Central Hall, Westminster, from July 19th to 23rd, and enabled visitors to gain some idea of the development and excellence of chemical plant produced in this country. The exhibition, opened by Sir Max Muspratt, and designed primarily for the benefit of chemical engineers and users of chemicals, contained many exhibits of interest to the lay mind, which, if not of immediate medical application, were of importance in the preparation of pharmaceutical and biochemical therapeutic substances.

A general survey of the numerous apparatus showed the attention devoted to the production of non-corrodible alloys; three firms—namely, Messrs. Hadfields, Ltd., Firth and Sons, and Brown-Bayley—showing samples of, and tests upon, stainless steels adapted for various uses, whilst Messrs. Houghton's and the Lennox Foundry Co. provided different types of plant constructed of the well-known corrosion-resisting cast-iron alloys, "ironac" and "tantiron." To appreciate the value of the introduction of these alloys it is necessary to realise the many corrosion-inducing conditions under which they are used in chemical industry. Among other metals represented, and applied either alloyed or in the pure state, to the construction of plant, &c., may be noticed copper, nickel, aluminium, and tin, the nickel laboratory apparatus of the Mond Nickel Co. having a well-deserved reputation. A striking exhibit by the Thermal Syndicate well illustrated the many utilitarian applications of their translucent or transparent silica product, "vitreosil," and among the samples exhibited were noticed small syringes, the sterilisation of which could be carried out with facility and without risk of fracture.

The display of apparatus by Messrs. Negretti and Zambra showed no striking novelties, but a wide range of thermometers, hydrometers, and continuous distance recording instruments, such as pyrometers, depth gauges, &c., whilst an interesting brochure entitled "The History of the Thermometer" was distributed gratis by the firm's representative. Bacteriological sterilisers of various types were shown by four firms, one of which, Messrs. Brown Bros., also exhibited their well-known and highly-efficient patent stills for the preparation of distilled water, in addition to numerous forms of laboratory gas and water taps. The Webb colloid mill provided by Messrs. Baker Perkins is a device in which a new principle is adopted for the preparation of emulsions; and Messrs. Bennett, Sons and Shears drew attention to their patent "mulser" for rendering emulsions permanent by forcing them under pressure against a revolving disc. From this machine the average output is 20 gallons per hour.

The Kestner Evaporator Co., Ltd., showed a very compact water-softening plant, in which one of the newer and high-efficiency permutitic compounds is employed. This apparatus completely softens about 700 gallons of an average hard water, and requires only 7 lb. of common salt for complete regeneration. Attention was also directed to a form of horizontal evaporator, constructed chiefly of copper and widely used at the present time for the concentration of fruit juices, solutions of insulin, and other liquids. The exhibit of the Cape Asbestos Co. served to illustrate the wide applicability of the different forms of asbestos, and, considering the readiness with which this substance may be sterilised, it is somewhat difficult to understand why it finds little or no use in surgery.

Many examples of plant used for large-scale chemical manufacture were also on exhibition, and there was ample evidence of the skill and ingenuity of the British chemical engineer.

## THE PREVENTION OF POISON ACCIDENTS.

UNDER the name of the "Porcupine" poison-bottle stopper, the Waverly Comb Co., Ltd., 374–8, Old-street, London, E.C., have placed on the market bottle corks of varying sizes which have a wooden metal-covered head from the periphery of which project small blunt spikes, so that in withdrawing the cork from the bottle care has to be taken that the fingers do not come into contact with them. If the cork is grasped carelessly, or in the dark, the sense of touch at once makes the person aware of the unusual nature of the stopper, and thus attention is called to the bottle. Many accidents have occurred through mistaking a poison bottle for one containing other substances, and the invention ought to go a long way towards reducing the number of accidents which occur from this cause. It is, however, doubtful whether any invention can be a substitute for common sense and care; the human factor must always be reckoned with.

## A SKIN REACTION FOR TYPHOID.

IN an article reprinted from the *Semana Medica* (No. 19, 1926), Dr. G. Rodriguez, of Buenos Aires, gives a further account of his skin reaction for typhoid.[1] In this article he states that his reaction is intended as a test of individual susceptibility. His object is to discover why apparently two-thirds of the population are not susceptible to typhoid and he hopes to evolve a means of finding out those individuals who ought to be inoculated against the disease.

He finds 8,000,000 organisms from Vincent's vaccine to be the most satisfactory dose, but gives tables showing the effects of double and quadruple doses. The most interesting table is that showing the results in persons who had been vaccinated against typhoid at different periods. The reaction in the great majority of those who had been recently vaccinated (i.e., about two months previously) was negative, but in those vaccinated over a year it was strongly positive. This he explains as meaning that the organism is in an allergic state; it is hypersensitive to the typhoid protein (bacilli), but still protected against actual infection. Dr. Rodriguez still considers that his previous experiments, with only 2,000,000 bacilli, provide a test which is of some value for diagnosis if positive in the early stage of typhoid and for prognosis if negative in the later stage, but he admits that further experience is necessary.

## AN ALMONER'S DEPARTMENT.

THE annual report of the almoner's department at St. Thomas's Hospital, a substantial pamphlet of nearly 80 pages, is full of interest. The department's activities are varied and laborious, and the psychological side of them often deeply interesting. A constantly recurring difficulty is the ignorance and apathy of the majority of hospital patients about their rights as insured persons, and their reluctance, at first sight, to realise that insurance and the keeping up of payments concern them and their future lives. "A great many cases are sent to the almoner in the out-patient department for purely social reasons, maladjusted family life, difficult adolescence, and troubles arising from jealousy, fear, remorse, or loneliness." Patience and sympathy are usually successful in removing these difficulties. Bad housing gives the almoner abundant trouble. "It is not easy to move families, nor is it always possible to know what constitutes technical overcrowding." For example, a child of 18 months, suffering from conjunctivitis and probable keratitis since birth, belongs to a family several members of which have attended the eye department on and off for years. "Three girls of 19, 14, and 13, the father, and a boy of 12 all slept in one room, the mother and three younger children in the kitchen." The local M.O.H., it is stated, did not consider this a case of overcrowding. In circumstances such as these it is impossible to deal effectively with obstinate eye troubles. There is an increase in the number of patients who have to be "discharged as well able to pay for any form of treatment." One of the heaviest pecuniary charges is the cost of transporting patients to and from the hospital for treatment which, although it is provided only when absolutely necessary, last year cost £729. The lady almoner is Miss A. E. Cummins.

## ANNUAL CHARITIES REGISTER.

THE Annual Charities Register and Digest is a classified register of charities in or available for London. The number of these deriving their income from purely metropolitan sources and expending it solely upon metropolitan cases is comparatively small; but the number which, while located in the metropolis, derive their income from all parts of the Kingdom, or afford assistance to applicants from all parts, is very large. Excluding missionary and spiritual institutions, the turnover of the institutions enumerated in the Charities Register from which information could be obtained amounted in 1923 to rather more than £15,000,000. Voluntary contributions accounted for about £6,700,000, and £1,150,000 came from legacies. From these figures alone it is evident that London charities are of immense importance in the national life; but even more remarkable are the number and variety of the organisations at work for the relief of suffering. The Register and Digest,[2] issued for the Charity Organisation Society by Longmans, Green and Co. has reached its thirty-fourth edition, and is a clear and concise reference book now well-known for its useful and comprehensive information. To compile and publish works of this kind is a laborious task, and Londoners are fortunate in having at their disposal so good a guide to the charitable societies and institutions of the area.

[1] THE LANCET, 1926, i., 298 and 575.

[2] Annual Charities Register and Digest. 1926. Published for the Charity Organisation Society by Longmans, Green and Co., Ltd., 39, Paternoster-row, London, E.C. Pp. 533. 8s. 6d.

## CHEMISTRY, PURE AND APPLIED.

To peruse the pages of a classified price-list on Exact and Applied Science, Part VII., such as that recently issued by Messrs. H. Sotheran and Co., containing the titles of nearly 4000 volumes devoted to chemistry and chemical technology, is a liberal education in the history of these sciences. The items included in the present list range throughout the various phases in the development of chemistry from the earliest speculative theorising through the period of alchemical investigations, with its gradual evolution into the age of accurate experiment, observation, and deduction, to the present time. To the readers of THE LANCET the fact that so many of the authors of works on pure and applied chemistry from the seventeenth to the early nineteenth centuries were medical men will not be without interest: ministers of religion are, however, in serious competition. The brief annotations, appended to many of the items, being erudite without dullness, and frequently humorous, prevent the ennui that might be expected from the reading of a catalogue.

A rapid survey of the various entries enables us to realise the wealth of material available. Thus a complete set of the Transactions of the Royal Society of Arts, dating from 1783 to 1845, in good condition, a highly important and rare series, is quoted at a very moderate figure. Numerous works of that versatile author, F. C. Accum, famous for his exposure of food adulteration under the subtitle of "Death in the Pot," are offered, including his manuals on chemical instruction, brewing, wine making, and the manufacture and use of coal-gas. Among other rare works are to be found Schmidlap's German treatise on fireworks dated 1564, the "Art of Photogenic Drawing" by Fox Talbot, Kunckel's "Ars Vitraria Experimentalis," and Stephen Hale's "Statical Essays," a description of early experiments in plant and animal physiology. The catalogue is admirably arranged and will prove of interest to senior and research students, analysts, the connoisseur of rare works and all interested in the history and controversies of chemical science, each of whom will find within its covers much that will appeal to his taste.

## A BURIAL IN THE MARKET-PLACE.

PUBLIC health administration is perhaps humdrum in this country. Not so, however, in Calcutta. The *Indian Medical Record* (May, 1926) protests against the turning of a public market in that city into a burial ground. The facts as given in the *Record* were, briefly, as follows: A beggar died in the market, and after his death some of the butchers suddenly took it into their heads that the man was a saint. They insisted on burying the body in the very place where he had died. In such a case the proper procedure would have been to inform the police, who would have disposed of the body. This was not done—rather, in the very presence of the deputy mayor of Calcutta, the body was buried inside the market near to the place where foodstuffs were sold. Later the corporation appointed a special market committee to thresh out the matter. They did this thoroughly, for they obtained evidence that (1) the deceased fakir was a Christian; (2) had been convicted in a stabbing case and sentenced to imprisonment; (3) the sentence had been remitted on the occasion of the Queen's Diamond Jubilee; (4) no express, valid, or implied permission had been given for the burial—on the contrary "the attitude of the authorities was directly against the burial from the beginning to the end" [and attitude is static]. In the opinion of the Advocate-General for Bengal the body had been unlawfully buried on the property of the corporation, who were not only entitled to exhume and remove the body, but were also not precluded by anything that had happened from doing so. In August, 1925, the corporation definitely resolved that if within two months of the date of that meeting no one came forward to do it, the chief executive officer should exhume the body and bury it in a proper place. Nothing had been done since that previous resolution. It was clear to the *Indian Medical Record* that not only had the Calcutta Corporation made a laughing stock of themselves, but that their folly endangered the public health. To us it is even clearer that the difficulties of public health work in India lie not mainly with the parasitic or climatic causes of disease.

## A CHILDREN'S SPA.

THE mineral springs of Mont Dore have for many years been known to balneologists of all countries, and have an established reputation in the treatment of respiratory complaints. Dr. A. Debidour and Dr. K. Eckenstein [1] give an interesting account of an original and enterprising development which has taken place there in recent years, as the result of which the treatment of children has become one of the principal features of Mont Dore. It is obvious that this object could not be achieved without some fairly extensive reorganisation of the routine: the customary programme of a spa would present little attraction to children, and their presence in large numbers would be incompatible with the comfort of many adult patients. Accordingly a special children's department was equipped, in which separate inhalation chambers were provided for boys, girls, and small children, under the management of a nurse. Push-ball and other attractions are employed to popularise the visit to the inhalation room and to stimulate respiration. The vapour baths are supplemented by a school of respiratory education in which the children are taught exercises which develop the respiratory muscles. The exercises take place both in the open air and in a gymnasium, and are astutely combined with games of various kinds. The Mont Dore treatment is indicated for children with enlarged tonsils and adenoids, both before and after operation, as well as for asthmatics, and encouraging results have been obtained in increasing the lung capacity and the general condition of the patients.

[1] Franco-British Medical Review, June, 1926.

## UNIVERSITY COLLEGE HOSPITAL APPEAL.

THE extension of the hospital's work, made possible by the Rockefeller Foundation's gift, has increased the number of beds available by 202. Although most of these are already endowed, it is estimated that the regular income will have to be increased by at least £15,000 a year if the establishment is to be properly maintained. There is already a debt of £20,000, and in connexion with a special appeal for the maintenance fund an illustrated booklet, entitled "A Meeting of the Ways," has been prepared which gives an account of the hospital's history and services to the community.

## SMOKING AND FIRE WORSHIP.

*To the Editor of* THE LANCET.

SIR,—In THE LANCET of May 22nd last the habit of smoking is treated from an American as well as from a British standpoint (Sir Humphry Rolleston's address and the notes of Dr. J. Rosslyn Earp, of Antioch College, Ohio). Both communications, in my opinion, are defective in so far as they do not give sufficient importance to inheritance, often a dominating factor. The brain of to-day is a continuation of the brain of yesterday; in other words, we inherit what was transmitted or given us by our ancestors, and the difference in quality is but slightly discernible. If we hark back hundreds of years expecting vast changes in brain development we are disappointed; even thousands of years can be looked upon as yesterday in the ladder of evolutionary ascent, so that the brain of to-day and the brain of yesterday react almost equally in similar circumstances. Tobacco, the drug, acts as a liberating agent to nervous energy, like theine, caffeine, cocaine, matein, and similar narcotics in moderate doses, and facilitates nervous combustion; yet the mental attitude of the smoker depends but partially on nicotine, the narcotic, and chiefly on the act of smoking as an intricate rite.

Let us picture before our mind's eye a smoker, and follow him step by step; we will be convinced that in his moments of exaltation he has entered the moods of his fire-worshipping ancestors. There he is—the modern smoker—leaning back in an arm-chair with a pipe in his mouth casting fragments of interrupted sentences at you from between clenched teeth. He now strikes a match, holds its lighted head above the bowl of the pipe, draws but finds the tobacco too loosely packed. Inserting his left index-finger into the mouth of the bowl he packs the tobacco tighter. Meanwhile he holds fingers, fire, and bowl in such close proximity you would fain hurry the lighting to avoid burns; but no, he hugs the approximation, lingering over the warmth, and dwells fondly on the flickering flame before it dies. The tobacco alight, he peers into the glowing bowl and uplifting column of smoke, impelled upwards as if by subdued outburst of energy from the rotund receptacle. His gaze may be deflected from the column to cones of vapour ejected at intervals from his mouth, or on an occasional wreath revolving its ascent skywards, intensifying his brood into that of semi-mesmerism.

In his present mood he is subconsciously participating in the experience of his fire-worshipping ancestor who gloried in sacrifice and the transmutation of matter through that ghoulish column into what he considered was a spirit-world. The smell of burning flesh, the crackling and simmering, the whole gamut of colours displayed in the offering, the death dance of the ascending column, created a religious fervour and exaltation attenuated somewhat in the offspring that smokes his pipe of tobacco. An impoverished setting diminishes the exaltation. Surely no present-day mind can disentangle itself from the past.

I repeat, what the centuries have bequeathed reacts in more or less the same way in similar circumstance.

I am, Sir, yours, faithfully,

Buenos Aires, June 30th, 1926. M. A. I.

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A CORRESPONDENT inquires in what dosage and at what intervals emetine should be used in hæmophilia.